THE Soybean Digest

OFFICIAL PUBLICATION • AMERICAN SOYBEAN ASSOCIATION

Margarine usage of soybean oil has doubled. See page 7.

NOVEMBER ✦ 1953

VOLUME 14 ✦ NUMBER 1

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THE Soybean Digest

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HUDSON, IOWA

Vol. 14 • November, 1953 • No. 1

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THE SOYBEAN DIGEST

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THE AMERICAN SOYBEAN ASSOCIATION

Executive offices, Hudson, Iowa.

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Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the industry.

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EDITOR'S DESK

HOW TO GET HIGH QUALITY SOYBEANS

Last month's editorial titled "Processors Should Be Consistent" brought many comments, most of them from people who were shocked that an editor would even consider mentioning the possibility of water being added to low-moisture-content soybeans before marketing.

Allowable moisture content of No. 2 soybeans is 13 percent. Because of weather conditions most of the 1953 crop came out of the fields at 10 percent or lower moisture. Yields, in pounds, were cut back accordingly.

One good shower would have brought the moisture content of beans in the field up to the allowable level. There would have been more bushels, less shattering loss, and lower percentages of split beans. Foreign material percentage would also have been lower, for small pieces of soybeans which pass through the 8/64 inch round-hole screen are classed foreign material under present grades.

Is it more wrong to add water after harvest than to wait for a rain? The latter would have meant a long wait in most areas this year. But had it rained and moisture percentages climbed there would have been no question about moral rights or legality.

Is it more wrong for a grower to add water than for an elevator operator to add foreign material? When neither was present as the crop was harvested? Has anyone questioned the legality of blending to upgrade certain lots, bring others closer to tolerances? There are those who shudder and point to Food and Drug when the addition of moisture is mentioned, saying it is illegal. Has it ever been proved? If so, what about adding water to soybean oil meal to bring it to established levels? Was the water there when the meal came from the drying units?

Is it not time we took a grown-up attitude in this industry? And in doing so pay on the basis of the value of the product? If discounts for high moisture content are justifiable—and we do not question them—then why are not premiums justifiable for low moisture? Why not pay the grower for what he delivers, be it good or bad?

Why don't we put this industry on the basis of buying and selling on the basis of true values—instead of trying to cover up hidden values by refusing to recognize them? If 9 percent moisture beans produce 20 cents per bushel more end products than 13 percent moisture beans, why not admit it rather than trying to cover it up? And pay for it? Considering the handling and storage safety factors, would the low moisture content beans still be the best buy? I'd rather have them in my bin!

We are growing earlier-maturing varieties of soybeans, the harvest season moves ahead a little more each year. That means lower moisture content, and higher general quality. Why not recognize it?

When processors are willing to pay for high quality they will get it. When there is a financial incentive for the harvesting and marketing of low foreign material content and low moisture content, growers will produce and market that kind of crop. Foreign material content by design has been creeping steadily upward year after year. Moisture content by design will do the same thing unless an incentive for low moisture is provided.

Grain dryers can be altered to add water as well as remove it! It can be done at the country elevator as well as at the farm. Shouldn't such malpractices be stopped by removing the incentive for them? And now?

LET'S KEEP SOYBEANS COMPETITIVE

Within this month there will be an announcement from the Secretary of Agriculture on 1954-crop soybean support levels. You will want to watch for it. And if you have opinions on what it should be, forward them to the Department now!

Political complexions change rapidly. Emphasis on agricultural programs has changed since the Wisconsin election. The previous mandate to return agriculture to a free enterprise basis is less strong. The high fixed costs of equipment, farmers' taxes and labor make free markets seem less desirable to many farmers.

It now appears that support levels will be higher than if they had been announced a month ago. Levels of the cereal crop supports indicate soybean supports at 80 percent of parity or above.

Whatever the level of support, let's keep ourselves in the position of producing our crop for consumption, rather than for storage. We have never had a surplus of soybeans in this country. If we will do an intelligent job of merchandising our products we need not have a surplus in 1954.

WE DO NOT KNOW HOW MANY SOYBEANS WE CAN USE. Neither do we know how many our friends in Europe and Asia can use. If we will do an intelligent job of selling soybean oil meal, soybean oil, and soybeans we need have no surpluses for years to come!

But we cannot do so by pricing ourselves out of the market! Soybean oil has made tremendous gains because it has stayed competitive in price. Soybean oil meal has become America's greatest source of protein because it has been competitive in price. 1953-crop soybeans are going into export channels because they are competitive in price. So long as we can make a reasonable profit selling soybeans let's sell them—and use them—and let's never consider support levels as more than a temporary price leveling device. When Uncle Sam buys our crop each of us pays!

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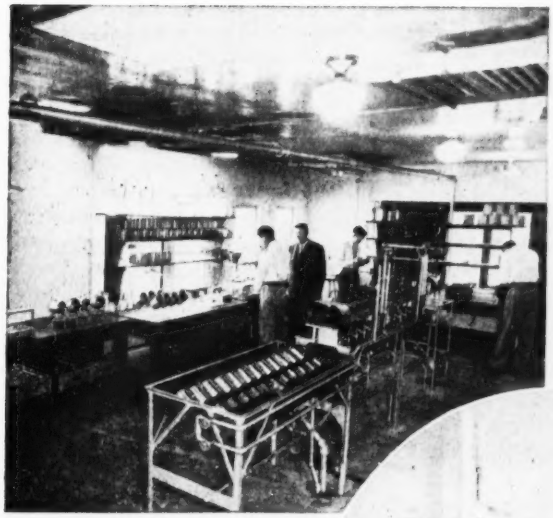
Are we creating markets for agricultural products? And for soybeans? It appears that we are merely filling established demands. And where are agricultural prices? And are our products being used? Or stockpiled?

Serving The Soybean Industry



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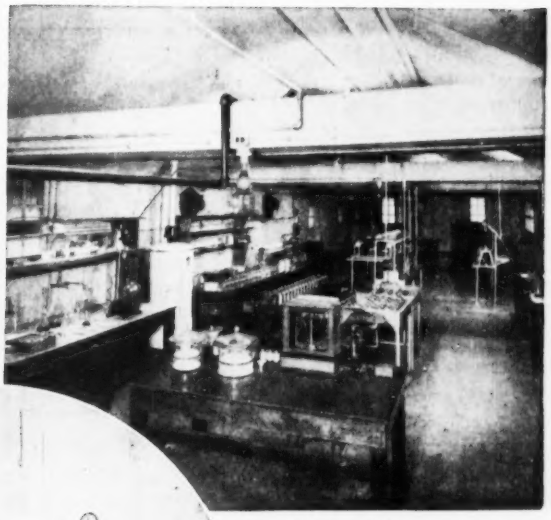

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ACTIVITIES OF YOUR ASSOCIATION

ASA PROGRAM. The finance program of the American Soybean Association was put in gear in late September and October with meetings at Paulding and Mechanicsburg, Ohio, and Taylorville, Sullivan and Champaign, Ill.

More meetings will be held in the northeast Indiana - northwest Ohio area and in central Illinois as the program is set up in these areas, and will be followed by meetings in the Mid-south in December.

Response of producers in the area has been good to appeals for backing the Association in its educational and promotional program.

Soybeans are now a permanent part of most farm rotations and producers have a vital stake in protecting the future of the crop, Albert Dimond, ASA vice president-field man, in charge of the meetings, pointed out.

Without a dynamic well-financed program by the Association to protect the interests of the crop and to promote adequate markets, over production, ruinously low prices and acreage controls are inevitable, Dimond said.

Nobody knows how many soybeans our national economy can absorb if a real job of promotion is done, according to Dimond. Now is the time for action.

This is a job that cannot be done adequately by general farm organizations, but must be taken over by commodity groups such as have been organized for the cotton, livestock, dairy and citrus industries, among others.

Producers at the meetings were offered a three-point plan of action:

1—They were asked to express themselves on the government's soybean program for 1954 (reported below).

2—They were invited to become members of the American Soybean Association.

3—They were encouraged to make direct contributions of 10 cents an acre to be used in the Association's educational and promotional work in behalf of soybeans and soybean products.

Elevator men in the areas where the meetings have been held have agreed to accept such contributions and to forward them to the Association.

Several other members of the ASA board of directors in addition to Dimond have been taking part in the meetings.

PRICE PROGRAM. Soybean producers at this time are overwhelmingly opposed to acreage controls on the 1954 crop of soybeans; and in most communities a majority would accept lower price supports on the 1954 crop rather than go into controls in 1954 or 1955. That is what a sounding out of sentiment in heavy producing areas by members of the board of directors of the American Soybean Association and others would indicate.

Expressions of sentiment were obtained through meetings or by large numbers of personal contacts in late September and early October. States where spot checks were made included Iowa, Minnesota, Illinois, Ohio, Indiana, Arkansas and Mississippi.

Biggest worry of producers is that acreage allotments on other crops may mean a heavy shift to soybeans next year, with many farmers planting large acreages to establish a base for allotments in 1955. They are anxious to avoid this and many are willing to accept a lower support price to do so.

At several meetings in Illinois and Ohio producers favored an 80-percent-of-parity support level in 1954 in preference to higher supports coupled with probable acreage controls in 1955. In some this was coupled with a demand that an all out effort be made to maintain exports.

On the other hand some directors reported little disposition among producers in their areas to accept less than 90 percent of parity.

If acreage allotments are placed on soybeans in 1954 or 1955, producers are opposed to using the 1954 acreage as a base for determining the allotment. They feel that the acreage grown in several previous years would make a fairer base.

ASA Director Ersel Walley, Fort Wayne, Ind., is a member of the U. S. Department of Agriculture oilseeds advisory committee that met in Washington Oct. 8 to consider the soybean and flax program. He used the expressions of producer sentiment as a guide in his recommendations.

For a report on the committee's actions see page 33.

GRADES. Complete agreement on what changes are desirable in the federal soybean grading standards and marketing practices was not reached at the meeting called by the American Soybean Association in Chicago Oct. 19.

But a smaller committee was au-

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thorized to meet early in November to explore the matter further, in an effort to work out a plan acceptable to all segments of the industry.

Two main proposals under consideration were: An allowable foreign material content of 2 percent for U. S. No. 2 yellow soybeans instead of the present 3 percent; and premiums for soybeans with lower than 13 percent moisture content equal to the discounts now in effect on beans with higher than 13 percent moisture. The first would mean a change in grading standards, the second, in buying practices.

Processors, elevator men and exporters as well as producers were represented. Each segment of the industry had one man on the smaller committee.

Representing ASA were President Jake Hartz, Jr., Stuttgart, Ark.; Vice President and Field Man Albert Dimond, Lovington, Ill.; Secretary-Treasurer Geo. M. Strayer, Hudson, Iowa; and Directors Ersel Walley, Fort Wayne, Ind., and David G. Wing, Mechanicsburg, Ohio.

—s b d—

THE COVER PICTURE

Margarine at one time was only a minor outlet for soybean oil—it used a mere 3,000 pounds in 1932—and some people in the soybean industry at times questioned if its market was worth all the fuss that was made over repeal of the anti-margarine laws.

But such is far from the case today. During recent years margarine has been the fastest growing outlet for soybean oil, and may well jump into first place in a matter of time. Margarine has more than doubled its soybean oil requirements in the last two years.

In 1952 soybean oil constituted 62.2 percent of all the fats and oils that went into the manufacture of margarine.

S. F. Riepma, president of the National Association of Margarine Manufacturers, estimated in an address before the recent convention of the American Soybean Association that over 900 million pounds of soybean oil will be used in the manufacture of margarine in 1958 if the present rate of increase is maintained. As they say in our town, "That ain't hay."

Cover photo is courtesy Swift & Co.

OMISSION IN ARTICLE

The attention of the Soybean Digest has been called to an important omission in the staff-written article, "Does Urea Threaten the Market for Soybean Oil Meal?" that appeared in the October issue.

In the Jennings graph used to determine at what price relationship it would pay the cattle man to feed urea, no mention was made of the cost of the urea used in compiling the graph.

The cost of urea is, of course, a vital factor and the graph is meaningless without it. A urea cost of 6 cents per pound was used in developing the graph.

Present cost of urea is about 7½ cents per pound, or 25 percent higher than the figure used in developing Jennings' graph. At a given corn price it is economical to feed soybean oil meal at a higher price for meal than is shown on the graph. The Digest regrets this ommission.

—s b d—

SOYBEAN QUEEN AT PORTAGEVILLE

QUEEN. Brown-eyed Alice Jean Porritt, a sophomore at Southeast Missouri State College at Cape Girardeau, is the latest Soybean Queen. She was crowned at the sixth annual National Soybean Festival which closed at Portageville, Mo., Sept. 26. Girls from five states competed in the event. Miss Porritt will also represent the state of Missouri at the Miss Universe Beauty Pageant in Long Beach, Calif., next summer. Over 15,000 people witnessed the annual queens' float parade which included 10 high school bands and over 40 highly-decorated floats.

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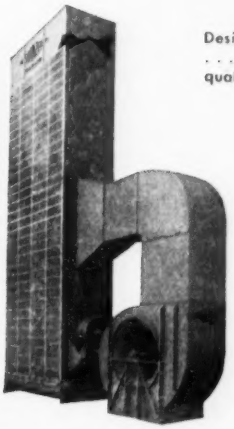

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—Digest photo by Pellett

WAITING FOR RAIN. Glenn Bower and Calvin Heilman looking over Bower's field which had been fertilized with superphosphate. It was June 13 and Bower was waiting for a rain before planting soybeans. The soil was dry six inches down. Getting a crop in the Killdeer area depends on rain at the right time. Field is level as a floor.

Ohio Takes the Killdeer

Unique Soybean Area to Be Given Over to Wildlife

By KENT PELLETT
Managing Editor, the Soybean Digest

BACK IN 1947 Ward Calland of the National Soybean Crop Improvement Council wrote a most interesting story for the Soybean Digest about Pelee Island, Canada, and the Killdeer area in Ohio.

In both of these spots farmers were then breaking the rules by continuous cropping of the land to soybeans. But yields were getting better all the time, even after 20 years of such cropping.

Large acreages of soybeans are still grown both on Pelee and in the Killdeer. But at last the basic rules of agronomy have begun asserting themselves and fewer farmers in either area are now growing them continuously. With such continuous cropping the organic content of the soil was lowered and its physical condition—poor enough in the first place—was made worse.

Soybeans are rotated with wheat on Pelee, and with wheat and clover in the Killdeer area. Farmers have learned they can grow wheat in the Killdeer by draining off excess surface moisture.

I saw many beautiful fields of wheat well headed out while riding through the area with Calvin Heilman of Kenton last June. Most of the Killdeer, about 20,000 acres in extent, lies in southern Wyandotte County, with a small patch in Marion County.

The Heilman brothers, Calvin, Arlo, John and Iber, are the leading producers in the Killdeer. They largely follow a rotation of wheat, clover, soybeans and soybeans. However, this varies, as farmers are very much at the mercy of the weather there. If the soil is not in the right condition for planting one crop then another may be substituted.

Has to Be Seen

The Killdeer soil has to be seen to be believed. Most of the land—probably an old lake bed—lies almost as level as a table, with perhaps six inches slope from one end of a 40-acre field to the other. Some has been drained with tile or ditches, but much still remains undrained.

Soil is known as Killdeer clay. It is one of the toughest in the world. It can be worked only with heavy equipment. Since the soil does not do a good job of holding its moisture and dries out very rapidly when worked, farmers prefer to work it as little as possible. As a result, land is plowed only infrequently. Most of the work is done with the disk.

Since soybeans are planted solid, cultivation is with the rotary hoe and harrow. Beans are not planted early and many weeds are killed before planting with disk and harrow.

After beans are planted the rotary hoe is used until they get their true leaves, then they are harrowed once.

Some beans are rowed, usually in 21- or 28-inch rows. They are planted and cultivated with regular bean equipment. Corn-row widths are too wide in the Killdeer since the beans do not shade the ground between the rows.

The Heilmans plant their beans

solid. They say weeds are more easily controlled that way.

Weeds are not as big a problem as in some other areas. Under such tough conditions it is no easier for weeds than crops to survive.

The Heilmans have a few cattle and put up some clover for feeding purposes. But they grow most clover for seed and are glad to plow down the whole plant for humus. Clover is grown mainly as a soil building crop in the area. Seed is incidental. Livestock farming is not extensive as most farmers in the area prefer cash crops.

Little Disease

You might think that disease would be bad in an area where so many soys have been grown. Heilman says the only troublesome disease is brown root rot, which also attacks other crops in the area. It is worst in seasons when growth is slow. Control is largely a matter of tillage to keep the crop growing rapidly. Also some seed treatment is used.

Ownership of the land changes rapidly. Land that lies so perfectly flat looks deceptively easy to farm. Many people buy it at what looks like low prices to "make a fast buck." They learn better the hard way. But farmers who buy the land right and learn how to farm it do very well.

* * *

Soys, however, are soon to lose much of their predominance in the Killdeer. The wildlife division of the Ohio Department of Natural Resources is in the process of acquiring between 50,000 to 60,000 acres of land in the area which it will set aside for hunting.

The division has already taken up its option on much of this land, including all that owned by the Heilmans.

The process is expected to take 10 years or more to complete, but after the wildlife division takes over there will be little production of soybeans in the area.

The Heilmans, who pioneered the growing of soybeans in the Killdeer, will retire from it. It will revert to a large extent to its natural state as a cover for pheasants, waterfowl, deer and other wild life, though farmers will still operate some land on a rental basis.

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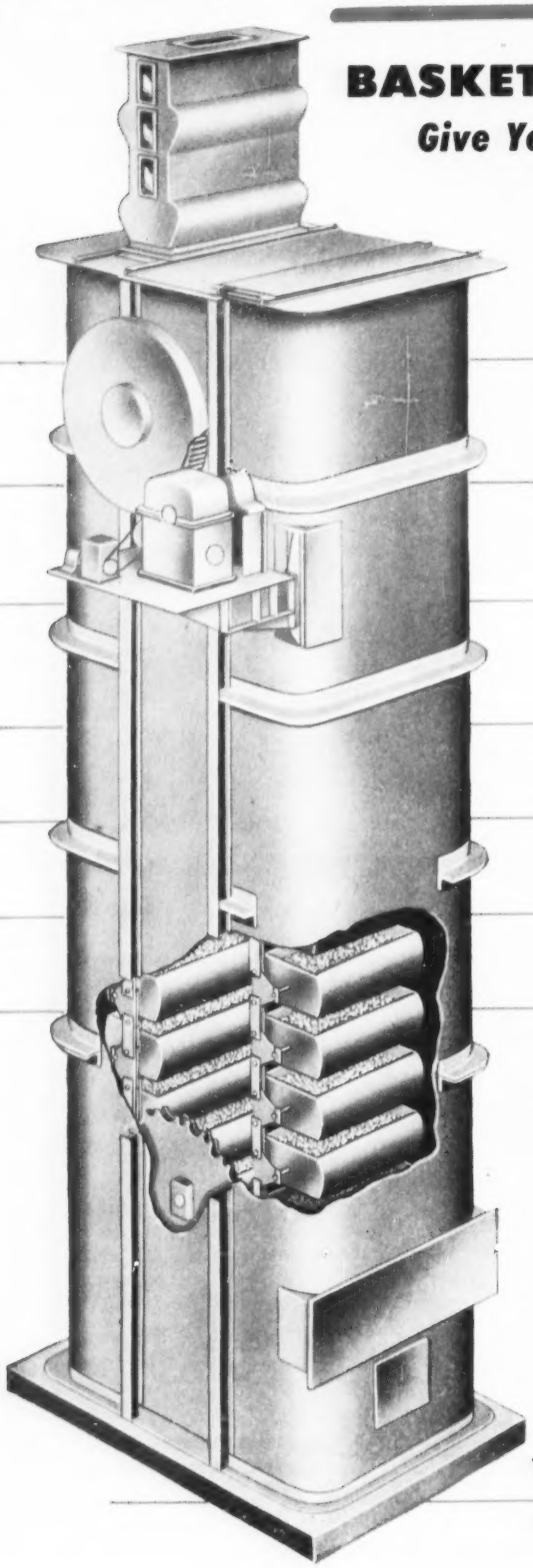

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AMERICAN SOYBEAN ASSOCIATION

Late News

Published 32 times yearly as a service to the soybean industry.

Hudson, Iowa, Nov. 10, 1953

MARKET SETBACK

Main cause of temporary market setback first week in November was news that U. S. Department of Agriculture would continue to sell crude cottonseed oil at 14 cents a pound during November, same as October. **Trade had expected announcement of a higher price.** And actually a CCC price list was made up and mimeographed with sales price for cottonseed oil at 15 cents. At the last minute government officials changed their minds and made up a new list.

There was no immediate official explanation to indicate **whether a rise in price is merely delayed, or whether cottonseed oil will be offered at 14 cents from here on out.** CCC is obligated to sell for no less than 14 cents on the domestic market until next July, **but can sell at a higher figure.**

OLD CROP DISAPPEARANCE

Disappearance of old crop soybeans in the July-September quarter is figured at about 51 million bushels. Reports indicate 50.5 million bushels were processed during the quarter. Bureau of Agricultural Economics says "this figure indicates a considerable tonnage of 1953-crop soybeans processed before Oct. 1."

SUPPORT PRICE

The American Soybean Association has recommended that Secretary of Agriculture Benson announce a **price support level of 80 to 85 percent of parity on 1954-crop soybeans with no controls on 1954 acreage,** Geo. M. Strayer, ASA secretary, stated this week in a letter to Howard H. Gordon, administrator of Production and Marketing Administration.

The Association also strongly recommended "that the Secretary of Agriculture proclaim at the time the 1954 price support level is announced, **that 1954 soybean acreage will not be considered in fixing acreage allotments"** if controls become necessary in 1955. This is to avoid a wholesale planting of soybeans next year in areas not previously growing the crop.

Association's position is based on sentiment of producers expressed in local meetings last month. (See details on page 6.)

Secretary Benson is expected to announce soybean price supports for the 1954 crop by Dec. 1. It is expected support will be **at least 80 percent of parity or higher.** Some observers even say 1954 support will be kept at 90 percent of parity—same level as this year.

This is a shift from earlier plans that would have set 1954 supports at 75 percent of parity, and stems from the political furor over the recent elections. **Next year's feed grain price supports were announced at the same level as this year** and 10 percent higher than intended a few weeks ago.

SOYBEAN MOVEMENT

Recent upturn in the soybean market increased disposition of producers to take beans out of storage. **J. E. Johnson, Champaign, Ill.,** reports one local elevator man as saying 22 percent of soybeans placed in storage at harvest time had been sold on the upturn. (Price there $2.55.) **G. G. McIlroy, Irwin, Ohio,** says it appears that $2.50-$2.60 may bring out a lot of beans there if and when the market gets that high. (Price there $2.48.) And **J. B. Edmondson, Danville, Ind.,** reports first intentions of producers in his area were to store 20 to 25 percent of the crop, but the figure is coming down and some soybeans are going to market now. (Price there $2.51.)

But most beans will go under loan in areas where the market is considerably below support level.

PROCESSOR OPERATIONS

Most Northern soybean processors are now operating at near capacity, though not all are doing so, according to our reports. Mills in Missouri are under way, and most are expected to be in operation soon elsewhere in the Midsouth.

QUALITY OF SOYBEANS

Foreign material is reported as very high in some Illinois counties, but otherwise soybean quality is good in that state. Foreign material averages around 5 percent in Lincoln County, Mo., and most beans have 5 to 10 percent damage. Some other Southern areas report excessive foreign material. **New Orleans Public Grain Elevator says beans received have a high percentage of foreign material and this necessitates considerable screening.**

GRADE CHANGES

Committee to consider changes in the federal soybean grading standards met in Chicago Nov. 6, with ASA Secretary Geo. M. Strayer as chairman. To be in attendance were Ersel Walley, Fort Wayne, Ind.; Howard McWard, Illinois Grain Corp., Chicago; E. B. Evans, Evans Grain Co., Decatur, Ill.; F. E. Benson, Archer-Daniels-Midland Co., Minneapolis; and Edward J. Kazmarek of the Chicago Board of Trade. (For more detailed report see page 6.)

MEETINGS

Seven more Association meetings will be held soon in central Illinois by Vice President Albert Dimond.

	Cash price to farmers for No. 1 soybeans Nov. 2	Cash price to farmers for No. 2 soybeans Nov. 2	Retail cash price for bagged soybean oil meal Nov. 2
Ill.	$2.60		$74
Ind.	2.53	$2.51	80
Iowa		2.50	
Kans.		2.48	78
La.		2.40 @ $2.50	
Miss		2.40 @ 2.45	70
Mo.		2.48 @ 2.53	77 @ $80
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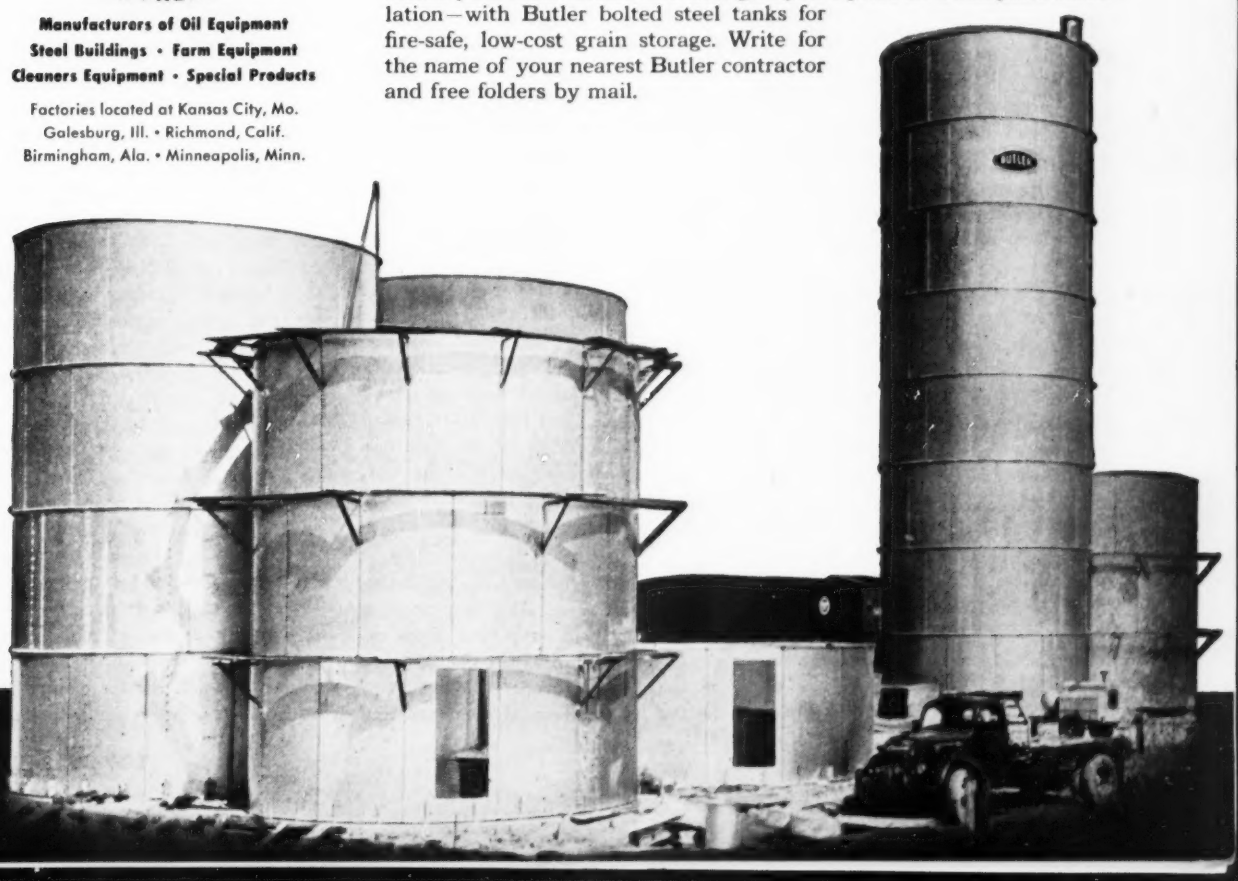

RESEARCH DEVELOPMENTS
at the Northern Regional Research Laboratory

From a talk before the annual convention of the American Soybean Association in St. Louis.

By J. C. COWAN
Northern Regional Research Laboratory,*
Peoria, Illinois

LAST YEAR, Dr. R. T. Milner, director of the Northern Regional Research Laboratory, reported to you at Lafayette, Ind., and he mentioned briefly some work which had been done under contract on Gelsoy. The contractor, Food Technology, Inc., of Chicago, Ill., found that this interesting soybean product had possibilities as a bread softener.

Gelsoy—Bread Softener

Gelsoy is the spray-dried, aqueous extract of alcohol-washed, hexane-extracted flakes. A description of its preparation from unheated soybean flakes was published in the Soybean Digest some years ago (1).

We have believed that this product has potentialities in the food market. In Food Technology's discovery of its bread-softening qualities, we may have a use which will become commercialized. Our laboratory is well-equipped to carry out baking studies; so, we undertook further investigations on the softening effect of Gelsoy.

It was found that Gelsoy at a low level was an effective softener for bread as measured by the squeeze test and by standard procedures in the testing laboratory. Although Gelsoy did not soften bread as much as the chemical softeners which have been barred recently by federal regulations and court action, it had other features which made it desirable. For example, dough-handling properties are improved and the bread remains resilient despite its softness. This softness and resiliency or lack thereof can be shown by compression tests. A round disc with the proper amount of weight on it is pressed on the slice of bread. Softness is measured by the amount of compression and resiliency by the ease of recovery to the original shape.

Gelsoy was approximately one-half as effective in softening as the barred chemical softeners. Figure 1 shows slices of bread which have been tested with a compressor for resiliency. Note that one slice has no depression, while the other remains depressed. This picture was obtained an hour after the depressions were made in both slices. However, the picture would be the same if the picture were taken 15 seconds after the depressions were made, i.e., recovery is the same for bread with Gelsoy as with bread containing no softener.

A commercial run in a bakery at Peoria, Ill., confirmed our laboratory results. Consequently, detailed information on how to incorporate Gelsoy in bread, the importance of the proper level of added oxidizing chemical such as potassium bromate, and the softening and dough-handling effects obtained were described by Dr. Ofelt of our laboratory before the Boston meeting of the Institute of Food Technologists in June (2). As a result we have furnished many samples of this material for evaluation.

Our cooperator on Gelsoy production, Allied Mills, Inc., has assisted us materially in supplying these experimental samples. Commercial use of Gelsoy now awaits the results of testing by commercial concerns, and the determination both of the possible market that may be available, as well as the economic feasibility of producing Gelsoy for that market. Also the classification and use of Gelsoy under the Standards of Identity for Bread, Food and Drug Administration, needs to be established.

Edible Spread

A year ago, Dr. Milner described to you some of our work on an edible spread from liquid soybean oil. You are aware of the difficulties which may be encountered when attempting to spread margarine at low temperatures. Also, you know that margarine and butter melt in our Midwestern summers so that they are inconvenient to use.

This inconvenience is minor for us, when we are at home, but a major one for our military personnel in front lines in cold or hot weather. Army margarine is usually prepared with high-melting fat, and consequently, the G.I. in a wintry Korea or Alaska patrol must shave it rather than spread it. Despite the higher melting point, normal air temperatures often melt the product and make it unsuitable for use. For example, the water and fat can and do separate into layers.

Three years ago, the Quartermaster Food and Container Institute listed this problem of a suitable edible spread as unsolved and needing a solution. With Korea as an added incentive, we took on this problem.

After trying several combinations, it was found that a composition of monostearin, soybean or other vegetable oil, salt, butter color, flavor concentrates, propyl gallate and cit-

*One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

ric acid (antioxidants and metal-inactivating agents which aid in preserving the spread), and vitamin A and D had interesting and desirable properties (3). This combination of monostearin, a monoglyceride which is already used extensively as a bread softener and shortening improver, with liquid vegetable oils is what scientists call a thixotropic gel, i.e., it is a solid suspended in a liquid which appears to be a solid; when stirred the gel becomes more liquid and requires less force to stir it. Thus, when cold it is firm, but on stirring spreads much easier.

The plastic range of this spread is greatly improved over currently available spreads. It spreads with ease at –0° F. and it maintains its form at 110°-120° F. At these higher temperatures, there is no separation of the spread into two layers because there is no water present in the spread. The proportion of monoglyceride in the spread has a decided effect on the ease of spreading.

One method of measuring spreadability is the extent of penetration of light weight cones when dropped into the spread. For example, a spread with 13 percent monoglyceride has a penetration of approximately 16 mm. at 34° F., whereas a composition with 25 percent monoglyceride has a penetration of approximately 7 mm. At penetrations below 5 mm., spreading of the product is very difficult. Army margarine loses spreadability at approximately 50°-60° F.

During the past year, we learned that this combination is affected by high storage temperatures which changed its plastic characteristics. At first glance, these changes appeared to be disastrous because the spread became hard and much less satisfactory. However, it was noted that the higher storage temperatures were beneficial if the storage period was limited. For example, the spread was softer at lower temperatures than a spread which had not been stored for a short period at higher temperatures. Fat chemists call this kind of change tempering. By use of a crystal-stabilizer, we found that this improvement could be maintained for a long period even at high temperatures (4).

Extensive taste-panel tests under a variety of conditions have shown that this tempered spread is an acceptable ration, and we are now concentrating our efforts on stability tests. These tests will determine if our "global" spread can be expected to withstand the vigorous conditions encountered in global use.

Factors in Soy Flour Use

Last year, Dr. Milner briefly mentioned our work on the importance of flavor in the use of properly prepared soy flour in bread. Our extensive tests showed that at the 5-percent level, which is 2 percent above the legal limit for any flour except wheat flour in white bread, a group of over 200 people could not distinguish the flavor from milk in bread. Since then, our work has progressed further and we have some of the technical answers to the use of soy flour in bread and some more answers on the best way to make the soy flours more desirable to the bakers.

Actually, this problem of desirability to the bakers rather than to the consumers is a major part of the problem of soy flour use. The consumer desires a more nutritious loaf of bread, which he will receive if soy flour is added. However, if the baker in the shop does not use soy flour properly, or does not have a uniform product supplied to him, the baker will not use soy flour. We must prove the "case" for soy flour to him.

This is the situation which must be achieved: (1) Knowledge of how to use soy flour must be placed in the hands of the man who can use it, (2) he must have a good reason for using soy flour, and finally (3) he must be supplied a uniform high quality product.

It may seem pointless to repeat some of these factors, but let us review the first one briefly. For some time, the research workers in cereal technology have known that bread dough containing soy flour needs to have an oxidizing agent such as potassium bromate added to it. It is standard practice in most commercial bakeries to use potassium bromate in the manufacture of all bread. It is an accepted ingredient in the flour and bread standards established under the Food and Drug Administration. However, when one of our research men visited a bakery in the Rochester area where "Cornell" or "McCay" bread is popular, he learned that even they were not aware that the proper use of potassium bromate would improve their bread.

We have recently made a survey of soy flour from different producers and established that a good quality of bread, as a baker defines it, can

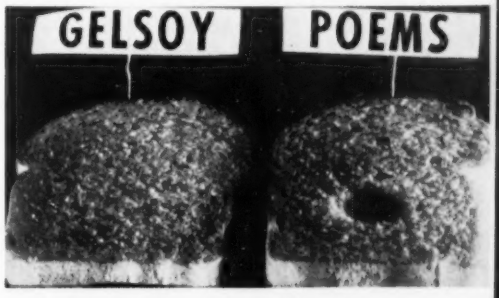

Fig. 1. Bread slices showing resiliency behavior. (Bread on the left was prepared using Gelsoy as a softener; bread on the right was prepared using polyoxyethylene stearate.)

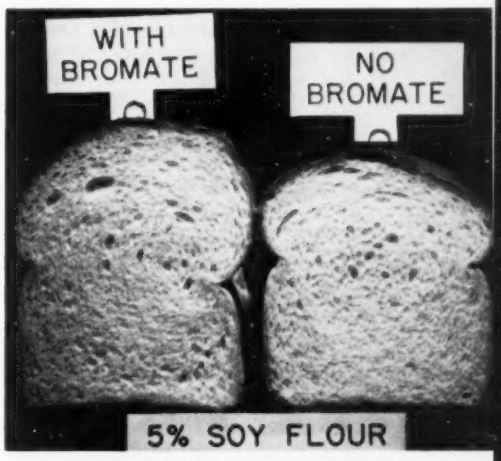

Fig. 2. Bread slices showing effect of the presence (left) of bromate and absence when soy flour was used.

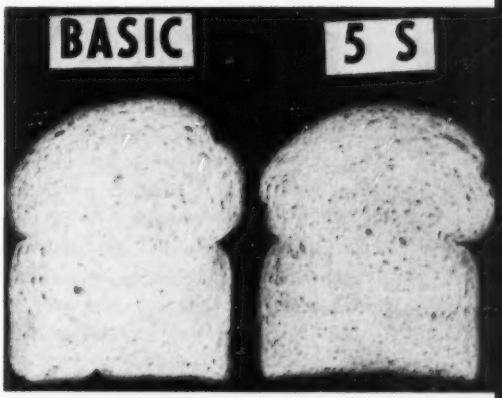

Fig. 3. Bread slices showing effect of optimum bromate in bread with (right) and without (left) soy flour.

be made with up to 5 or even 7 percent added soy flour. Dr. Smith of our laboratory presented much of this information at the last meeting of the American Association of Cereal Chemists at Buffalo in May 1953 (5).

Potassium bromate improves the loaf volume of bread containing soy flour, but proper control is necessary. Also important to the baker is the effect of potassium bromate on dough character and handling. Soy flour without added oxidizing agent makes bread dough very sticky and hard to handle in the equipment now available in modern bakeries. Proper use of potassium bromate removes the stickiness and very measurably improves the handling of the dough in either mechanized or hand operations.

As an example of what can be done with proper use of potassium bromate, Figures 2 and 3 are illustrated. On Figure 2 we find a picture of a cross section of bread containing 5-percent soy flour. I chose to show you bread with 5-percent soy flour because it accents some of the problems. The section on the left is of a loaf prepared using potassium bromate, the section on the right is of a loaf prepared without bromate. At this level of soy flour, the effect is somewhat dramatic. The bread without bromate is decidedly smaller and less appealing to the consumer.

Next, let us compare bread with and without soy flour at the optimum bromate levels. In Figure 3 note the differences are slight. At 3 percent which is the maximum permissible in white bread (6), the difference can be discerned only by the expert. One important type of commercial bread contains 4 percent of nonfat dry-milk solids. Bread containing 4 percent of dry-milk solids plus 3-percent soy flour compares favorably in appearance and is more nutritious than bread with an equivalent amount of either soy or milk solids. Again, it requires an expert to tell the differences.

I believe you will agree with our contention that bread containing soy flour can be prepared and used so that the bread is comparable to commercial bread. Indeed, 3-percent soy flour is permissible in white bread and very acceptable white breads can be manufactured using soy flour.

You will remember that we have two additional goals to attain before soy flour is accepted by the baker. In order for the baker to add soy flour to bread, he must have good and sufficient reasons for doing so which are acceptable to him. This is particularly true when you remember that soy flour contains no gluten and, like other additives, yields weaker doughs from which it is generally more difficult to produce acceptable bread.

A very good reason for adding soy flour is that soy flour makes bread more nutritious. However, this reason may not be enough. An additional reason for the baker may be the increase in bread yields which result. This basic factor of importance to the baker is now being investigated.

With knowledge of how to use soy flour, with good and sufficient reasons for using it, and with a good quality and uniform soy flour available, I believe the baker will turn to soy flour as a helpmate.

Flavor Stability

Our research on flavor stability of soybean oil is continuing, and I could have spent all my time on this subject. However, soybean oil products are now definitely improved over 10 years ago. We believe we have been of considerable assistance to industry in this improvement by directing its attention to ways in which the undesirable peculiarities of soybean oil as an edible oil can be minimized.

With the present surplus of fats and oils, we believe more attention should be given to the use of soybean oil for industrial nonfood items. Consequently, more attention will be given to the fundamental problems in the industrial field, but we hope to continue our work on soybean oil "reversion" until the problem is solved as completely as is necessary.

At the present time we have very large stocks of both edible and inedible fats; indeed, over a billion pounds of edible fats are now in storage in this country. Although usage of soybean oil has been steadily increasing, it may decline or only hold its own over the next 10 to 15 years. Consequently, surplus fats including soybean oil must find other outlets both foreign and domestic. As a result, the emphasis in our research program will shift to find new nonfood uses for soybean oil.

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Southern Lab. Develops a New Spread

A MARGARINE-LIKE product that is spreadable at temperatures well below zero and well above 100 degrees F., and keeps better than margarine or butter, can be prepared by the use of new, modified fats—acetooleins—in a formula with highly hydrogenated cottonseed or peanut oil.

Researchers of the Southern Regional Research Laboratory, New Orleans, have developed the new fats through chemical substitution of acetic acid for part of the fatty acids in oleins, which occur in most vegetable oils.

This new-type fat should have exceptional keeping quality that would make it of interest for an all-climate spread for armed services use. But it is not yet approved for food use, according to R. O. Feuge, chemical technologist, oilseed division of the Southern Regional Research Laboratory.

This is in contrast to the global edible spread developed by Dr. J. C. Cowan and his associates at the Northern Regional Research Laboratory, Peoria, Ill. This latter spread is based on a mixture of monoglycerides and oil and is developed from approved food fats.

Soy Flour Has Lowest Cost Protein

PROTEIN EATEN in steak costs nearly $6 a pound. In fluid milk it runs about $3 a pound. And in soy flour the protein cost ranges from 10 cents to 25 cents a pound.

These relative costs were determined by the U. S. Department of Agriculture by selecting the amount of protein in a pound of each of the three foods, and applying current market prices.

Sirloin steak contains 17.3 percent protein, and at $1 a pound the protein would cost $5.78. Milk has 3.5 percent protein, and at 24 cents a quart it would be about $3.20 per pound of protein.

Soy flour is between 36.5 percent and 50 percent protein, depending on the amount of rich soybean oil contained in the soy flour, according to standards issued by the Soya Food Research Council of Washington, D. C. Cost of soy flour ranges from 5 to 9 cents a pound, the higher prices being set for the flour containing a larger percentage of oil and lower percentage of protein. Therefore the protein in soy flour with a high protein and low-oil content would be about 10 cents per pound.

Proteins are among the most essential components of food. They provide the building blocks for muscle and other body tissue. Scientists and economists frequently use the protein consumed per person in a nation as a factor in determining the standard of living held by various countries.

Because of its high protein value and its low cost, soy flour is a popular ingredient for the protein enrichment of bread and other bakery goods such as rolls, muffins, coffeecakes, pie crusts and other sweet goods.

"Soy flour is not only the low-cost protein today," says the Soya Council, "but it also is one of the best ingredients available for mixing in with many processed foods."

RETAIL PROTEIN PRICE REPORT FOR U. S. A. Oct. 15, 1953

Food	Retail price*	% Protein†	Price per lb. of protein‡ paid by consumer §
Beef—			
Chuck Roast, lb.	$0.52	16.2	$2.95
Hamburger, lb.	0.42	16.1	2.08
Round Steak, lb.	0.86	17.6	4.72
Cheese—			
Cottage, 12-oz. box	0.24	19.5	1.63
Cured Cheddar, lb.	0.68	25.1	2.32
Chicken—			
Frier, ready-to-cook lb.	0.62	15.2	3.97
Eggs, fresh, doz.	0.68	11.4	3.90
Fish—			
Haddock, frozen fillet, lb.	0.48	18.2	2.64
Salmon, canned pink, lb.	0.53	20.5	2.49
Lamb, leg, lb.	0.75	15.0	4.71
Milk—			
Evaporated, 14½-oz. can	0.15	7.0	1.86
Fresh, whole, qt.	0.22	3.5	2.48
Non-fat, dry, lb.	0.40	35.6	0.97
Pork—			
Chops, lb.	0.88	13.3	6.15
Ham, whole, lb.	0.69	14.7	4.12

*Estimated retail prices reasonably representative of current U. S. prices on basis of spot checks and price trends. Must be adjusted to meet local conditions. †Percent protein, Composition of Foods, U. S. Dept. of Agriculture, Agriculture Handbook No. 8. Foods may vary appreciably from these values. ‡In estimating the price per lb. of protein in the above foods, all carbohydrates are arbitrarily calculated at 10c per lb. and fats at 30c per lb. The dollar value of vitamins, minerals and water is considered negligible on a pure chemical market basis. The balance is charged against protein. § The proteins considered in this report are all of animal protein nutritive quality.

This report is calculated and distributed as a public service by The Protein Economics and Research Council, Inc., Ames, Iowa.

CHAYEN PROCESS IN U. S.

In oilseed extraction the possibility is foreseen of eliminating many steps now necessary to successful extraction. Decortication, roasting, flaking, separation and recovery steps will be either bypassed or modified.

Credit for development of this process goes to a team at British Glues & Chemicals, Ltd., working under the direction of I. H. Chayen, according to Chemical Engineering. The first commercial installation of the Chayen process started operating in Great Britain during 1949. Since then two more English plants have joined the initial unit.

Arrangements recently have been completed for the Sharples Corp., Philadelphia, to act as process sales agents in the United States. Additional development work is planned to adapt the process to American usage in the animal fat and vegetable oil industries.

—s b d—

GRAIN DEALER MEETING

At a recent meeting of the board of directors of the Illinois Grain Dealers' Association, it was decided to hold the 61st annual convention next May 18 and 19 in Springfield, Ill. The Hotel St. Nicholas was chosen as conference headquarters.

Plans are already underway as to the program and entertainment, according to an announcement by E. S. Herron, secretary-treasurer, of Gilman.

Other officers of the association are: A. C. Koch, president, Breese; W. M. Herbst, first vice president, Franklin Grove; and John Bridson, second vice president, Thawville.

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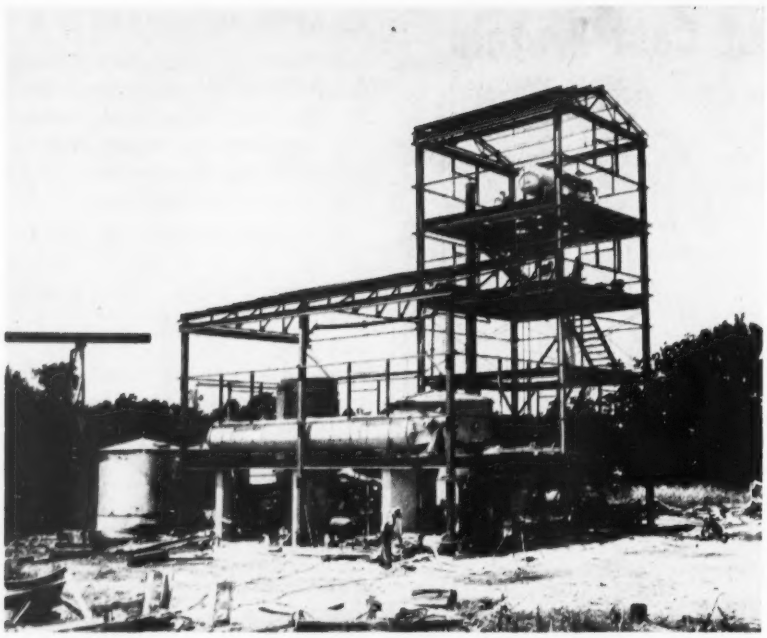

NEARS COMPLETION. Mississippi Cottonseed Products Co.'s compact filtration-extraction "package plant," nearing completion at Greenwood, Miss., is first of a brand new type designed and engineered by Lukenweld division of Lukens Steel Co. This direct solvent extraction system uses the techniques developed by the Southern Regional Research Laboratory of the U. S. Department of Agriculture.

Mississippi Mill Uses New Process

A BRAND new process of direct solvent extraction for oilseeds, called filtration-extraction, will go into commercial use by a Mississippi mill in 1953, reports the Southern Regional Research Laboratory, New Orleans, La. This mill will convert from hydraulic pressing to filtration-extraction and will process both cottonseed and soybeans. Rated daily capacities with cottonseed will be 150 tons and with soybeans 75 tons. This mill is the first to install a complete solvent extraction system based on filtration-extraction.

The new process is readily adaptable for quick conversion from one oilseed material to another, and no prepressing is required. Filtration-extraction may make it possible for smaller mills to apply solvent extraction because installations appear to be feasible with rated daily capacities as low as 75 tons for cottonseed. This capacity is in contrast to the range of 150-400 tons and more daily usually found in other solvent plants for cottonseed.

Filtration-extraction for oilseeds was developed through the pilot-plant stage at the Southern Regional Research Laboratory.

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NEW ONTARIO ELEVATORS

Formal opening of new elevators of McClean Grain Ltd., at Princess Ave., St. Thomas, Ontario, and of Port Stanley Grain & Transit, Ltd., at Port Stanley, was Oct. 17.

The two new elevators offer over 100,000 bushels storage for soybeans and grain, and receiving and shipping facilities for serving producers in surrounding Ontario counties.

The Port Stanley elevator offers waterside facilities for water transport of soybeans and grain to Toronto and other points at an economical rate.

The two companies are associated in management and were founded by Robert Boyd McClean and Robert L. Heath. The Port Stanley Grain & Transit firm was founded just this past year to provide a new grain marketing and shipping outlet for southern and western Ontario.

—s b d—

HEAVY-BODIED OIL

General Mills, Inc., chemical division, Minneapolis, Minn., has announced a heavy-bodied blown soybean oil. It is a partially oxidized oil that has been bodied to the desired viscosity by prolonged blowing at elevated temperatures under controlled conditions.

This oil is an extremely economical vehicle when used in the cheaper grades of paints and enamels compared with using kettle-bodied polymerized oils.

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Make Study of Fatty Acids Markets

THE U. S. Department of Agriculture has announced that a contract has been signed with John W. McCutcheon, Inc., a private research firm of New York City, to study existing and potential market outlets for fatty acids, synthetic detergents and emulsifiers. The research was initiated on recommendations of the livestock, and oilseeds and peanut advisory committees established under the Agricultural Marketing Act of 1946.

Previous studies have shown that, as a result of improved processing methods, new and expanded markets for fats and oils probably can be developed. One of the most promising potential markets is in the use of fatty acids and fatty acid derivatives by industry in chemical processing. Synthetic detergents and emulsifiers also offer promising potential market outlets for fats and oils.

Under the terms of the 12-month contract, the McCutcheon firm will interview representatives of business firms, will evaluate production and marketing trends for fatty acids, synthetic detergents and emulsifiers, and will furnish progress reports and a final report to the department.

The fats and oils branch of the Production and Marketing Administration is responsible for the work under this project.

—s b d—

PACKAGE-TYPE PLANT

Blaw-Knox Co., Pittsburgh, Pa., has designed a package-type plant that makes modern, continuous fat splitting practical for the smaller processor.

Using the Colgate-Emery process, a postwar development, the new plant has a rated capacity of 500 pounds per hour. Although developed as an economical, low capacity unit, the package plant assures the high yields (up to 98 percent) of quality products and the low operating costs characteristic of this continuous process but previously available only in larger units.

Plants with capacities ranging from 1,500 to 7,500 pounds per hour have been operating successfully since 1947 and have contributed to the economic production of high quality fatty acids and glycerin.

A product of the company's chemical plants division, the new Blaw-Knox design features ease of erection and simplicity of operation. The fat-splitting column, 65 feet high, is unhoused and requires a ground space 5 feet square. The accessories require a building space 10 by 15 feet and 16 feet high.

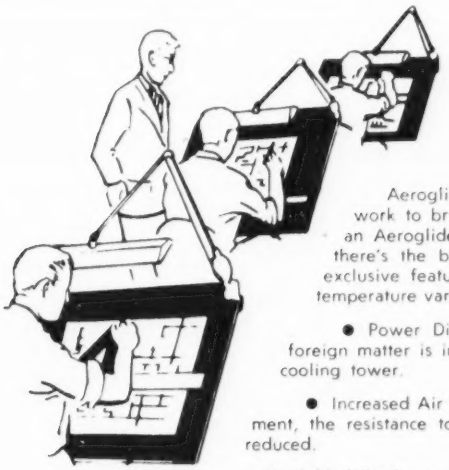
It is suited for splitting soybean and other vegetable oils and their soapstocks.

—s b d—

SUEZ CANAL MOVEMENT

Movement of Chinese soybeans through the Suez Canal during January-June totaled 10,323,000 bushels, or over 50 percent above the volume in the same period last year, reports U. S. Department of Agriculture's Foreign Crops and Markets.

If shipments in the second six months are about equal, it would result in the largest volume through the Canal since the war, but around half the average movement in 1933-37.



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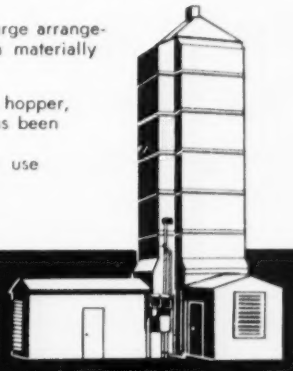

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Sharp Reduction in Estimate of Crop

HARVEST OF the 1953 soybean crop was completed in most northern areas in early October and was well along in the Midsouth when the Digest went to press.

With continued favorable harvest weather only the crop in the Southeast and late varieties in the Midsouth should remain unharvested by the time our readers receive this issue.

In the northern part of the bean belt the harvest was one of the earliest and perhaps the fastest in soybean history. Weather was very dry and clear, perfect for combining. In some parts of northern Iowa harvest was begun and finished in a single week.

Harvest was reported as 25 percent completed in Virginia and 95 percent in southwestern Ontario as the Digest went to press.

Oct. 1 indications point to a crop of 259.4 million bushels, about 7 percent less than the Sept. 1 forecast and 11 percent below the 292 million bushels produced in 1952, according to the U. S. Department of Agriculture crop reporting board. The Oct. 1 prospect was the lowest since 1949.

The U. S. average yield of 18.1 bushels per acre is well below the 20.7 bushels last year and the lowest since 1947.

USDA said the Oct. 1 prospects were lower in all major North Central states except Ohio which held the Sept. 1 yield, and Minnesota where the yield per acre was one-half bushel higher than on Sept. 1.

Prolonged drought over much of the soybean area of the South Central states resulted in a sharp deterioration of the crop during September, with indicated production dropping from nearly 25 million bushels Sept. 1 to 19.3 million bushels Oct. 1. A considerable acreage was reported being abandoned or diverted to hay.

Prospects in the South Atlantic states changed little during September, according to USDA.

Quality of harvested beans is generally reported good to excellent in all areas north of south central Illinois, though beans quite generally were a little small in size and there were more splits and chipping than normal. Also, early season reports of a green tinge were very widespread.

Quality farther south is variable, with both good and very poor reports.

Moisture content has averaged very low this season with many reports of 8 to 9 percent, and 12 percent being about the top in many sections. However, there were late October reports of some high moisture content beans being harvested in the Midsouth, and also Kansas.

Excessive foreign material is reported in some Midsouth areas. A. A. Clarkson, manager of the public grain elevator at New Orleans, reports soybeans coming to the elevator have a high percentage of foreign material, making considerable screening necessary.

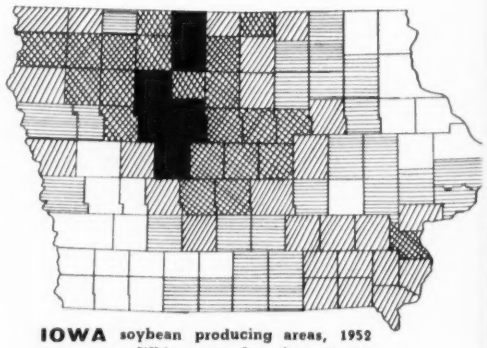
Reports of oil content are excellent in the Midsouth and average to better elsewhere: Arkansas 18-20 percent; Louisiana Delta 18-19 percent; west central Illinois 19.5 percent, basis 12 percent moisture; Iowa 17.8 percent to 19.1 percent; and northwestern Ohio 18 to 19 percent, basis 12 percent moisture.

A much larger percentage of the crop is being stored on farms and in elevators than in past years—50 to 70 percent in Iowa, Indiana, Illinois and Ohio areas. Many elevators, also some processors, rented most of their storage space to farmers. A large part of the crop is going into storage also in some parts of the Midsouth.

Spot reports from our correspondents:

Arkansas

Paul C. Hughes, Farmers Soybean Corp., Blytheville (Oct. 24): Yield depends entirely on when crop was planted and what thunder showers it received. South of Blytheville were several 30-bushel yields Then one man north of Blytheville got



IOWA soybean producing areas, 1952 crop year. White areas, less than 100,000 bushels per county. Horizontal lines 100,000 to 300,000 bushels. Slanted lines, 300,000 to 500,000 bushels. Cross lines, 500,000 to 1 million bushels. Black, over 1 million bushels. Iowa stands third in total soybean production this year.

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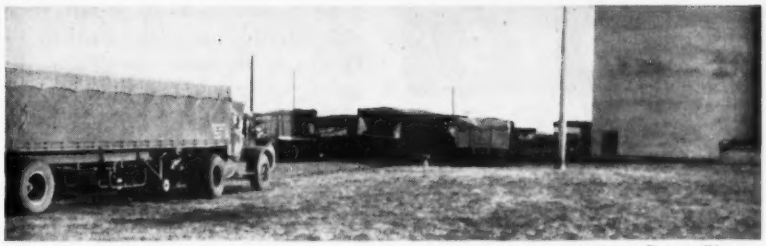

—Soybean Digest Photo

SOYBEAN RUN. **A few of the trucks unloading soybeans at the Belmond, Iowa, plant of General Mills, Inc., Oct. 7. Heaviest part of harvest was already over, perhaps the earliest in history in this northern Iowa area. Most of these trucks are from Minnesota.**

226¼ bushels from a 100-acre field. Test weight is lower than last year. Stalks and foliage in many fields are as green as expected in mid-September, while beans are dry and popping. Unusual number of green pods make it hard to store soybeans this year.

Illinois

Russell S. Davis, Clayton, for west central (Oct. 19): Giant foxtail was the only weed that did well in the beans this year. Dry weather reduced growth in most others. A big wheat crop sold at good price has kept many growers from having to sell their beans for ready cash. Many growers say they will sell at $2.50. Looks like average yield in this area might be a little over 20 bushels. A lot of fields made 20-24 bushels.

W. V. Simmons, Quincy Soybean Products Co., Quincy (Oct. 24): Yield cut 30 percent account of drought. First half of crop green, soft and not storable. Last half good quality.

Indiana

Chester Biddle, Remington, for northwest (Oct. 17): Per acre yield 5 to 10 bushels down compared with 1952. Total yield a little lower. Beans are small. Some greenish color. Drought damage severe. Thirty to 35 percent will be stored on farms; 30 percent in local elevators. Just now it looks as if 25 to 40 percent will be under loan.

Iowa

Karl Nolin, Ralston, for west central (Oct. 26): Per acre yield 20 bushels against 30 bushels in 1952; total yield one-half of 1952. Drought damage resulting in shriveled and green beans affecting about 10 percent. About 30 percent will be stored on farms; 40 percent in local elevators. And about 40 percent will go under government loan.

Kansas

J. W. Thelman, Soy-Rich Products, Inc., for Sedgwick County (Oct. 26): Per acre yield three to eight bushels. Small seed. Early beans dry and small. Late beans coming in wet.

Missouri

George C. McLain, Dannen Mills, Inc., St. Joseph, for Buchanan County (Oct 14): Per acre yield not over 50 percent of 1952 but a little larger acreage. I would say quality averaged No. 2, improved as season progressed. Not more than 10 percent will be stored or go under government loan.

Nebraska

Nebraska Weekly Weather and Crop Report: Yield of soybeans on irrigated land is very good.

North Carolina

C. S. Hotchkiss, manager Carrituck Exchange, Elizabeth City, for Carrituck, Camden and Pasquatank Counties (Oct. 19): Per acre yield 40 percent off first pickings. Seed small size, quality good.

Ohio

D. G. Wing, Mechanicsburg, for west central (Oct. 26): Per acre yield about 60-70 percent of 1952. Later beans of good quality. Some early beans green and cracked. Sixty to seventy percent stored. If market continues to go up fewer will go under loan.

Oklahoma

Ralph S. Matlock, department of agronomy, Oklahoma A & M (Oct. 26): Per acre yield tripled that of 1952, which was low. Total yield higher. Quality good to excellent. Some drought damage on October maturing varieties. Plenty of rain at present. Large percentage of crop is being stored for higher price.

SOYBEANS FOR BEANS

State	Yield per acre			Production		
	Average 1942-51	1952	Indicated 1953	Average 1942-51	1952	Indicated 1953
	—Bushels—			—1,000 Bushels—		
N. Y.	16.1	17.5	15.0	145	88	75
N. J.	17.3	20.5	16.5	269	410	363
Pa.	16.0	19.0	15.0	450	361	300
Ohio	20.2	22.0	22.5	20,971	20,680	21,712
Ind.	20.3	23.5	22.0	30,171	38,493	37,906
Ill.	22.4	24.0	21.0	78,829	85,128	76,146
Mich.	17.8	19.0	20.0	1,773	1,748	2,260
Wis.	13.4	17.0	14.5	523	816	725
Minn.	15.7	19.0	20.0	10,914	21,945	27,300
Iowa	20.4	25.5	22.0	35,181	37,587	34,100
Mo.	17.7	19.0	11.0	14,803	32,756	20,504
N. Dak.	11.2	12.5	13.0	147	362	299
S. Dak.	14.3	15.0	17.0	434	1,275	1,496
Nebr.	19.0	26.0	18.0	652	2,288	1,944
Kans.	12.6	11.5	8.0	3,310	7,360	4,008
Del.	13.2	17.0	15.5	658	986	1,023
Md.	14.5	18.0	18.5	739	1,350	1,758
Va.	16.1	17.0	15.0	1,791	2,958	2,550
W. Va.	14.2	15.0	14.0	19	15	14
N. C.	13.4	16.5	14.5	3,434	4,785	3,756
S. C.	9.6	11.5	12.5	353	1,127	1,262
Ga.	8.8	10.5	11.0	130	336	396
Fla.		20.0	20.0		240	240
Ky.	16.6	15.5	14.5	1,690	1,767	1,580
Tenn.	16.7	20.0	12.5	1,904	3,620	2,238
Ala.	15.4	19.0	20.0	766	1,748	1,760
Miss.	15.2	13.5	10.0	2,986	6,142	3,550
Ark.	16.9	16.0	12.0	5,799	13,856	8,796
La.	14.0	14.5	17.0	464	594	663
Okla.	9.7	10.5	11.0	207	861	759
U. S.	19.7	20.7	18.1	219,596	291,682	259,483

USDA crop reporting board for Oct. 1.

Wisconsin

Geo. M. Briggs, department of agronomy, University of Wisconsin: At present soybean prices tendency for dairy farmers to sell their raw soybeans instead of paying for the soybean oil meal. Many farmers interested in feeding their own grown soybeans.

Ontario

R. H. Peck, River Canard, for southwest (Oct. 24): Per acre yield about 66 percent of 1952, total yield about 90 percent. Quality fairly good except for a few green beans and some shriveled. More splits due to extreme dryness. About 30 percent will be stored on farms.

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PUBLICATIONS

For a complete list of books on the soybean crop and industry and related subjects drop a postcard to Circulation Department, Soybean Digest, Hudson, Iowa.

VARIETY LIST. A new list and description of all commercially-grown soybean varieties in the U. S. has been issued by the U. S. Department of Agriculture.

Variety descriptions have been taken from USDA Farmers' Bulletin No. 1520 as revised in 1948, and descriptions of recently introduced varieties have been added. Also included are synonyms of variety names and the names of old and seldom-grown varieties. This latter list should help to avoid the use of an old variety name for a new variety.

A variety committee including representatives of the American Seed Trade Association, the state agricultural experiment stations, the Bureau of Plant Industry and the seed act division of USDA was appointed to serve in an advisory capacity in the preparation of this list of recognized varieties.

The list should help to promote correct labeling of soybean seed and prevent confusion in variety names. The committee has been guided by the basic philosophy that a variety name assigned by persons other than the originator or introducer should not be recognized. It is the plan that before new variety names will be recognized, the new variety will be included in uniform nursery plantings conducted by the U. S. Department of Agriculture in cooperation with state agricultural experiment stations.

Varieties are divided into nine groups according to maturity and each variety is included in one of the nine groups. SOYBEAN VARIETIES, DESCRIPTIONS AND SYNONYMS, INCLUDING NAMES OF OBSOLETE OR OLD AND SELDOM GROWN VARIETIES. Production and Marketing Administration, U. S. Department of Agriculture, Washington 6, D. C.

INOCULANTS. The present-day farmer is put to much more bother in his use of legumes than were his predecessors of 50 years ago, the U.S. Department of Agriculture shows in its revised Farmers' Bulletin (F. B. 2003) on legume inoculation. But the attention now given to legume inoculation increases the return on these crops as a result of better yields and higher quality.

For one thing, it is now possible to be much more exact in fitting the most effective bacterial culture to the kind and, in some cases, even the variety of legume.

The new edition of this bulletin supersedes one put out five years ago.

There is a section on the economic importance of inoculation on 100 million acres of U. S. farm land in legumes every year, only about 20 percent of which are getting the inoculation they need.

A free copy of F. B. 2003 may be obtained from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

GREEN OIL. Oil obtained from frosted soybeans is green and sells at a discount, since it is harder to bleach than ordinary oil.

The present official grading method for green oil was devised in 1942 as an emergency measure. It arbitrarily divides green oil into three grades.

But a grading system similar to that for normal oils, expressing the extent of green damage on a continuous scale, would indicate the treatment necessary to hold the loss of oil in bleaching to a minimum. Studies are now in progress at the Northern Regional Research Laboratory to develop such a method.

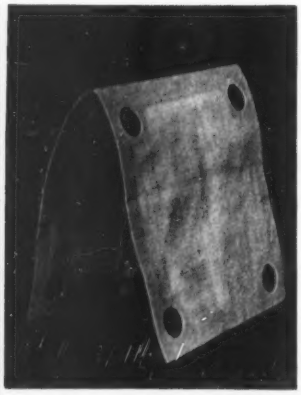
REPORT OF THE CHIEF OF THE BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY, AGRICULTURAL RESEARCH ADMINISTRATION. 1952. U. S. Department of Agriculture, Washington 25, D. C.

MISCELLANEOUS

SOYBEAN COUNTY ESTIMATES 1951-52. Acreage, Yield, and Production Harvested for Beans in 20 Principal States. Bureau of Agricultural Economics, U. S. Department of Agriculture, Washington, 25, D. C.

DRYING OILS FOR THE PAINT INDUSTRY. By Dr. James C. Konen, Archer-Daniels-Midland Co. American Paint Journal, July 20, 1953, pages 63-84.

TERRAMYCIN SUPPLEMENT FOR DAIRY CALVES. By A. M. Mackay, W. H. Riddell and R. Fitzsimmons, Vermont Agricultural Experiment Station. Journal of Animal Science, February 1952, pages 19-23.



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FEEDING

MEALS. Studies on growth, feed consumption and feed efficiency of chicks fed diets containing soybean oil meals that had been processed in different ways have been made at Iowa State College.

The growth inhibitor in raw soybean oil meal was progressively inactivated by autoclaving, with substantially complete inactivation when the meal had been autoclaved 20 minutes at 15 pounds steam pressure. Either more or less heat produced a meal of sub-optimum nutritive value.

The improvement in nutritive value of soybean oil meal as a result of autoclaving may not have been entirely due to increased availability of the protein since chick growth was retarded when 10 or 15 percent of unheated soybean oil meal was added to a diet containing adequate amounts of high-quality meal. Heating soybean oil meals for periods longer than 20 minutes reduced the lysine content which may account for part of the reduction in nutritive value.

Urease activity was a satisfactory measure of heat treatment of soybean oil meals up to the point of optimum heating, but was of no value in determining overheating.

Fluorescing properties of solvent-extracted soybean oil meals increased markedly when the meals were autoclaved beyond the point of maximum nutritive value. There was no significant increase in fluorescence of meals autoclaved just sufficiently for production of maximum meal quality. Expeller meals were high in fluorescing properties regardless of whether overheating had occurred.

Water-soluble protein values were sharply decreased when solvent-extracted soybean oil meals were autoclaved at 15 pounds steam pressure for periods up to 20 minutes. Further autoclaving produced only minor reductions.

It is concluded that urease and water-soluble nitrogen determinations are satisfactory measures of underheating of soybean oil meals. A determination of fluorescence is an adequate measure of overheating in solvent-extracted meals, but is of little value in detecting overheated expeller meals.

LABORATORY ESTIMATION OF THE NUTRITIVE VALUE OF SOYBEAN OIL MEALS. By Stanley L. Balloun, Elton L. Johnson and L. K. Arnold, Iowa State College. Poultry Science, May 1953, Vol. 32, No. 3, pages 517-527.

A METHOD FOR STUDY OF THE EFFECTS OF HEAT ON THE NUTRITIVE VALUE OF SOYBEAN OIL MEAL. By H. J. Almquist and Stanley Maurer, the Grange Co., Modesto, Calif. Poultry Science, May 1953, Vol. 32, No. 3, pages 549-551.

HEAT. A test has been run at the University of Illinois on the influence of heat treatment and the solvent used in the processing of soybeans on the nutritive value of the meal in feeding pigs.

Meals which had been hexane extracted-desolventized, hexane extracted-partially toasted, hexane extracted-regularly toasted, and trichloroethylene extracted-regularly toasted were studied.

During early growth the last three meals were superior to the first; and in the entire study the trichloroethylene meal also failed to excel the hexane extracted-desolventized meal. The latter apparently was not toxic.

THE INFLUENCE OF HEAT TREATMENT AND SOLVENT UPON THE NUTRITIVE VALUE OF SOYBEAN OIL MEAL FOR SWINE. By D. E. Becker, C. R. Adams, S. W. Terrill, and R. J. Meade, University of Illinois. Journal of Animal Science, February 1953. American Society of Animal Production, 372 Broadway, Albany 7, N. Y.

PROTEIN. Cornell trials are reported in which isolated soybean protein and casein were used in simulated milk diets to study the protein requirements of baby pigs from two to thirty days of age.

Diets containing 16 to 32 percent of protein were studied. The diets with only 16 or 20 percent of protein always gave slowest growth rates and resulted in retarded animals. Fastest growth and most efficient feed utilization occurred from the 32-percent-protein diet, but 24 and 28 percent of protein gave relatively satisfactory results.

STUDIES ON THE PROTEIN REQUIREMENTS OF SUCKING PIGS. By R. F. Sewell, B. E. Sheffy, R. G. Eggert and J. K. Loosli, Cornell University. Journal of Animal Science, August, 1953, Vol. 12, No. 3, pages 596-604.

SALT-MEAL. Results of two experiments in which mixtures of cottonseed meal and salt were self-fed to beef cattle are reported by the Texas Agricultural Experiment Station.

No ill effects were observed from the use of these mixtures when the cows were allowed to become grad-

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ually adjusted to the high salt intake and were given access to an abundant supply of water at all times.

High salt intake appeared to have no detrimental effect on the reproductive performance of the cows.

THE EFFECT OF SELF-FEEDING SALT-COTTONSEED MEAL MIXTURES TO BEEF COWS. By J. K. Riggs, R. W. Colby and L. V. Sells, Texas Agricultural Experiment Station. Journal of Animal Science, May 1953, Vol. 12, No. 2, pages 379-393.

PROTEIN. Oklahoma results suggest that maximum feed utilization and rate of growth of pigs before weaning will be produced if the level of protein is about 35 percent until the pigs are four weeks of age, and about 25 percent afterward.

EFFECT OF LEVEL OF PROTEIN FED BABY PIGS. By Elwood F. Reber, C. K. Whitehair and R. W. MacVicar, Oklahoma Agricultural Experiment Station, Stillwater, Okla. Fed. Am. Soc. Exp. Biol. Fed Proc. Vol. 12, No. 1, part 1, page 427. March, 1953.

LETTERS

Objects to Editorial

To the Editor:

I just finished reading your editorial on "Processors Should Be Consistent" in the October issue of the Soybean Digest. I frankly was dumfounded when I read a statement you made in connection with the penalty suffered by farmers who deliver dry soybeans on contract.

Your statement reads thus: "If he (the farmer) were inclined to do so he could well afford to pour a barrel or two of water over his beans before taking them to town, or as he loads them out of the bin for delivery."

For one who is supposed to be interested in encouraging farmers to produce a quality crop and maintain high standards of quality, your statement suggesting "watering" of soybeans, which in my book is a gross infraction of grain trade practices and subject to severe penalties, is a deplorable subtitute for any of the constructive statements that could have been penned.

I'm afraid your approach to the problem of getting processors to pay a premium for low moisture soybeans is a poor one. Editorials of that type will get you nowhere—in fact, you fail to make a good case out of perfectly logical evidence that would support the case adequately. The idea of moisture premiums is sound. But, don't try to scare us by threatening to "turn the hose on" if we fail to come through.

Please don't encourage farmers to indulge in mal-practices nor even suggest such ideas to them. There are other more satisfactory ways of obtaining justice and they are more effective, believe me.—*Fred H. Hafner, director soybean oil meal sales, General Mills, Inc., chemical division, Minneapolis, Minn.*

Soybeans in Brazil

To the Editor:

We are large producers of wheat flour in many countries in South America and are also operating a number of cottonseed, peanut, sunflower and other vegetable oil mills.

Until recently soybean production was very limited in Brazil, but it takes on a new importance and acreage is expanding rapidly. A recent law requires the admixture of 3 percent of soy flour in wheat flour and we are interested in the production of soy flour for human consumption.

We would very much appreciate it if you could see it possible to supply us with the best manufacturing method which we are to use.

Brazil soybeans contain about 17 percent oil and an average of 8 percent moisture.—*E. Marshack, Bunge Corp., New York, N. Y.*

And Commendation

To the Editor:

I have just looked over the October issue of the Soybean Digest, and I wish to commend you for the No. 1 editorial (on price supports) in this issue. I am recommending that our top folks in the Department read it. I am sure most of them will agree with you.—*Fred J. Rossiter, associate director, Foreign Agricultural Service, Washington 25, D. C.*

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GRITS and FLAKES... FROM THE WORLD OF SOY

◆ Boone Valley Co-op Processing Association, Eagle Grove, Iowa, opened a new $600,000 solvent extraction plant Oct. 8. Firm is owned by 56 co-operatives in the area.

◆ The appointment of Harry J. Garrison as territory sales manager for north central Illinois has been announced by the formula feed sales department of A. E. Staley Manufacturing Co., Decatur, Ill. Garrison, who resides at Walnut, Ill., has been a feed sales representative in Illinois, Iowa and Indiana for a number of years.

◆ Delbert L. Rucker has been appointed director of information of the National Fertilizer Association. He will assume responsibility for editing Fertilizer News, biweekly publication of the association, and will handle press and radio contacts. He was associated with the U. S. Department of Agriculture for nearly 12 years.

◆ *Ralston-Purina Co. has purchased land for a new Chow mill at Wilson, N. C., the second in that state.*

◆ Blaw-Knox Co., Pittsburgh, Pa., is installing a 100-ton-per-day cottonseed processing plant for Delta Cotton Oil & Fertilizer Co., Jackson, Miss. Design will provide for ready conversion to the processing of soybeans and other oilseeds. Construction is scheduled for completion in time for processing of most of the 1953 crop.

◆ Appointment of Roy W. Nelson as resident vice president of the Minneapolis & St. Louis Railway Co. has been announced by Lucian C. Sprague, president. Nelson entered the railroad's service in 1914 in the freight claim department.

◆ J. R. Peat, connected with the St. Louis sales department of Chase Bag Co. as special representative, has been promoted to sales manager of the St. Louis branch. He joined Chase Bag as a salesman in St. Louis in 1948.

◆ *Lawrence C. Paul, assistant superintendent of Swift & Co. soybean mill at Cairo, Ill., has been transferred to Swift's mill at San Antonio, Texas.*

◆ Robert H. Griffiths, general purchasing manager of Allied Mills, Inc., Chicago, appeared as keynote speaker at the company's annual chemists' seminar in Peoria, Ill., Oct. 9. He addressed the firm's 25 control chemists from the Peoria and seven other Wayne Feeds manufacturing plants.

◆ J. C. Hackleman, crops specialist of the University of Illinois, discussed adapted soybean varieties and the importance of certification of seed in three regional seed and soil science clinics in Illinois in late October.

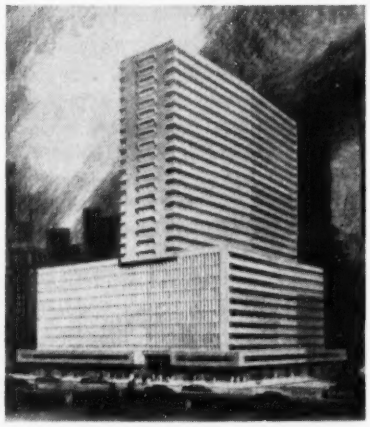
◆ Ragnar R. Rossing, editorial director of Grain & Feed Journals, Chicago, died at the age of 82 Oct. 3, still actively engaged in editorial work. Generally regarded as the dean of grain journal editors, he had been with the one firm 63 years.

◆ *E. J. Cecka, vice president of sales, and Harold W. Spute, vice president and controller, have been elected to the board of directors of S. Howes Co., Silver Creek, N. Y.*

◆ Arkell & Smith, paper bag manufacturer, held an open house recently attended by several thousand people, to mark the completion of a $300,000 expansion program at its Wellsburg, W. Va., plant.

◆ Georgia Feed and Poultry Conference will be held June 21 and 22, 1954, at Dinkler Plaza Hotel, Atlanta, Ga. For further information contact Will L. Kinard, Ashcraft-Wilkinson Co., 601 Trust Company of Georgia Building, Atlanta, Ga.

N. Y. PRODUCE EXCHANGE



NEW TRADING MART. This 30-story, 25-million-dollar air-conditioned skyscraper, to be known as No. 2 Broadway, is to rise on the site of the 68-year-old New York Produce Exchange Building at Bowling Green. The site, totaling 73,000 square feet, has been leased by the executive committee of the Exchange to Jack D. Weiler of New York City and Benjamin H. Swig of San Francisco for a period of 50 years with two renewal options of 25 years each. The building will contain 1 million square feet of space. New York Produce Exchange trades in soybean oil and a large number of other commodities.

— s b d —

MATCHETTE RETIRES

L. D. Matchette, general manager of the Nitragin Co., Milwaukee, Wis., since 1921, and president since 1943, recently retired from active participation in the business. He is 79 years old.

Matchette has turned active management of the business over to his three sons. John A. Matchette is now president; Dick is vice president; and Jim is executive vice president.

Miss Elsie L. Zick, who has been with the company more than 25 years as office manager, retains those duties and has been elected secretary. G. H. Haug, who also has been with the Nitragin organization for 25 years, has been elected treasurer and will also continue as production manager.

The Nitragin Co. was founded by Franklin J. Matchette, L. D.'s brother, in 1912. L. D. took over the management from him in 1921. He is one of the most important personalities in the field of legume inoculation,

Tractor paint — made from linseed oil partly processed from farm grown flax seed.
Plastic steering wheel, a product made with soybean meal perh.ps from your bean fields.
Electrical system parts—more of the many plastic products which soybean meal helps make possible.
Engine castings are made from molds which depend on linseed core oils for lubrication.

Now even tractors "eat" crops from farms like yours after they are transformed into different products by creative processors like Cargill. With new uses like these for your crops, no wonder Creative Processing eats up ¾ of all farm products.

He's cultivating parts of a tractor

These soybeans may end up in your tractor thanks to Creative Processing that uses up ¾ of farm products.

Tractors help produce soybeans. Soybeans help produce tractors. Almost unbelievable, isn't it, that things you grow help make the implements you use to grow them.

Note around the tractor picture above just four of the important uses made of soybeans and other products grown on farms in this area, and at least partly processed in Cargill plants.

Every day Cargill Creative Processing is helping to stimulate the market for dozens of farm products. Prices go along with supply and demand. Cargill is glad its Creative Processing broadens the markets for the products you grow.

Through its feed and seed divisions, Cargill also processes many products for more profitable farm use.

Your market for soybeans is better because this pie—and millions like it every day—is baked with shortening containing soybean oil. Soybean farmers need creative processors to take beans from the fields and end up with cans of shortening on grocers' shelves—and Cargill soybean oil plants are part of this creative processing chain.

Because Cargill pioneered the use of antibiotics and Vitamin B-12 in its Nutrena Pig and Hog Feeds, many farmers report they can now raise hogs faster than ever before. Nutrena Feeds are another important phase of Cargill's Creative Processing. In Nutrena feed mills up to 31 different farm-grown ingredients are processed into more than a hundred feeds for livestock and poultry. This helps make a bigger demand for the grain you grow and, at the same time, gives you better feeds than you could mix yourself.

How farm markets have grown can be traced on this chart which shows the increase in America's non-farm population. As more people move to cities and towns, the greater is the market for farm products. That's a big reason why figures now show about 75% of all farm products are "eaten up" somewhere else than on the farm where they were grown. Creative processors like Cargill play an important part in helping supply this growing market. Cargill's 26 factories and processing plants are all close to the growing areas of the farm products needed. This makes more markets available for the farmers of these areas. In addition, Cargill's grain marketing division sells grain to other processors all over the world, and thus helps get better prices for your farm products.

CARGILL, Creative Processors of Farm Products

Processing and Grain Marketing Offices in Minneapolis and 35 other cities

This is how Cargill is telling the importance of processing and processors to farmer-readers of papers like The Farmer, Wallaces' Farmer, Dakota Farmer, etc.

◆ Eaton-Dikeman Co., Mt. Holly Springs, Pa., manufacturers of E & D filter papers, announces the appointment of T. J. Druding, Rye, N. Y., as sales manager. He was formerly Eastern district manager for Helena Rubenstein. Eaton-Dikeman is the only plant in the U. S. devoting its entire output to the production of filter paper.

◆ *K. E. Beeson, Purdue University extension agronomist, is pictured in a plot of the new Harosoy soybeans on the Oct. 1 cover of Indiana Farmers Guide.*

◆ Austen S. Cargill has retired as chairman of the board of directors of Cargill, Inc., Minneapolis, Minn., but will continue as a member of the board. John G. Peterson, vice president, is the new board chairman.

◆ Fulton Bag & Cotton Mills will shortly begin construction of a 1 million dollar plant at New Orleans, it was announced by Jason M. Elsas, vice president in charge of Fulton's New Orleans operations. The building will house complete textile and multiwall paper bag facilities. Elsas stated it will be the most modern and completely integrated operation of its kind in the country.

◆ W. H. (Bill) Lillard, president and general manager of the Fort Smith Cotton Oil Co., Inc., Fort Smith, Ark., is rounding out 65 years of family experience in oil milling started by his uncle, W. H. Lillard, and carried on by his late father, R. E. Lillard. Bill assumed the presidency of Morrilton Cotton Oil Mill, Morrilton, Ark., in 1936; and the presidency of Fort Smith Cotton Oil Co., Inc., in 1952.

◆ *J. B. Trigg has been promoted to sales manager of the Chase Bag Co. branch at Buffalo, N. Y. He has been sales representative at the Dallas branch.*

◆ Otis McIntosh has been transferred from director of public relations for Ralston Purina Co., St. Louis, into the sales department. He has been succeeded by George Kyd, who has had farming, newspaper, government and public relations experience.

◆ "The Proper Use of Lecithin in Chocolate Manufacturing" is an article by A. Walter Liebig in the September issue of the Manufacturing Confectioner.

◆ William H. Hurst has been appointed a sales representative of John J. Woods & Sons, national distributor of the Dixie feed mills and process grinders, manufactured in St. Louis. He will cover northern Illinois.

◆ *James F. Pouchot has been appointed sales representative for Chase Bag Co. and will be assigned to the Chicago sales office. He had been employed by the Textile Bag Manufacturers Association.*

and the oldest in point of service. He will remain as board chairman.

He was a catcher in semi-pro baseball in Milwaukee around 1900, and has retained a vital interest in the game. A chief interest now is the Milwaukee Braves.

—sbd—

ANDERSON TREASURER

ROY L. BRITTAIN

Roy L. Brittain has been elected treasurer and director of the V. D. Anderson Co., manufacturer of vegetable oil extraction machinery, according to an announcement by Carl W. Zies, president.

Comptroller of the V. D. Anderson Co. since 1948, Mr. Brittain, in addition to his new responsibilities, will continue to head the bookkeeping, cost accounting and budgeting departments of this company, a subsidiary of Chesapeake Industries.

Brittain is considered a leading authority on accounting, credits and time studies and is the author of numerous articles on the subject of practical accounting and a frequent speaker at Accounting Association meetings.

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Brokers of Soybean Oil and Proteins
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STORAGE FACILITIES and WATER TERMINALS in industrial centers give added convenience to the users of Esso Hexane. Shipments are made to meet users' requirements . . . by tank cars, tank trucks or drums. Specify Esso Hexane for dependable, convenient delivery right to your door!

You get all 6 of these important features with Esso Hexane

1. **MULTI-STORAGE AVAILABILITY** — water terminals in industrial centers.

2. **UNIFORMITY** — made in modern refineries from carefully selected crude oil sources.

3. **HIGH OIL RECOVERY** — results from "balanced solvency." Recovered oil has good color and refining properties.

4. **EFFICIENT SOLVENT RECOVERY** — narrow boiling range allows complete removal from extracted oil and meal.

5. **PURITY** — high purity helps prevent non-recoverable residues. Low non-volatile content (specification limits non-volatile content to 28 parts per million maximum).

6. **MODERN HANDLING METHODS** — separate tank storage, pumping lines, tank cars and trucks, are used in all Esso Solvent handling operations.

Esso Solvents: versatility and dependability with controlled high quality.

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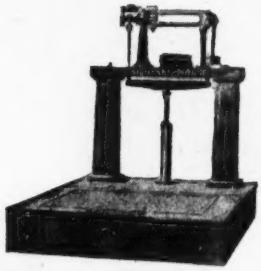
Seedburo Portable Vacuum Cleaners — Greater Capacity, Many Uses — New advanced centrifugal force design allows greater quantity of dirt to be deposited in tank instead of bag. Motor fan unit instantly detaches for use as blower. A rugged portable unit for years vacuum and blowing service. No. 90—$207.90 →

↑ **Platform Truck—Carries Heavy Load Easily** — Power and endurance are built into every part of this truck. Yet it moves freely and easily in any direction. One man can handle most loads. Ball-bearing swivel turns truck in its own length. 24" x 48"—height 14¾. Capacity 2,000 pounds. No. 9301—$81.90.

Seedburo Blowers — Double Duty for All Purposes — Especially designed for heavy duty commercial use. Powerful ½ G.E. motor. Displaces 53 cu. feet of air per minute. Average velocity 17,000 feet per minute. Ask for complete folder showing attachments for CONVERTING TO VACUUM CLEANER. No. 6 only $65.90. Other units to $131.45. →

← **Minneapolis Type Bag Trucks — Two Proved Favorites** — Hardwood handles and sturdy frame are built for service. Extra long nose bags easily. Handle length 52", nose length 10", rubber tires, wheel diameter 10". No. 660R—$40.35. Steel reinforcing for a lifetime of use. Countersunk bolts protect load. Ideal for paper bags, protects any bag. 42" handle length, 10" nose, 7" wheels. No. 586R, $43.20—not illustrated.



← **Portable Platform Scales—Roll where you need them** — Sturdy re-inforced steel gives years and years use. Loops, bearing, nose irons and weights are Parkerized rust-resistant, assuring accuracy. Capacity of 1000 pounds. Double beam can be used to tare weights of containers. No. 164 (single beam shown) $55.25. No. 166 (double beam not shown) $75.25.

↑ **Fairbanks-Morse Platform Scale—Rugged, low cost, saves labor** — Weighs up to 2500 pounds. Installed flush so that trucks can be rolled directly on scales. Can be fitted to print weight on ticket (extra). No. 12167 only $321.00.

Over and Under Platform Scale Indicator — Saves time and errors — Easily converts any beam scale to a fast "over and under" model with hairline accuracy. Saves time. Assures customer satisfaction by guaranteeing full weight. Saves you dollars by avoiding overweights. Pays for itself. No. 189, $62.00. →

← **New Seedburo Permanent Magnets** — 50% More Magnet Strength — 75% Lighter and Smaller — At New Reduced Prices — New Alnico metal is stronger, safeguards your expensive mills. Protects your equipment, helps prevent fires and product contamination. Sturdy welded construction. Single rows, easy to clean. Complete with hinge and parts for easy mounting. Width 4 or 5", $28.55; 6 or 7", $44.50; 8", $60.45; 10", $78.75; 12", $95.60; 14", $111.30; 16", $127.05; 18", $142.80; 20", $158.50; 22", $174.25; 24", $189.95.

↑ **Eureka Bagging Scale—For fast bagging** — Used by hundreds of Mills for over 14 years. This scale is easily attached to your spout or hopper. One scale may serve several bins and hoppers. Bags faster, avoids overweight. Easy to handle, trouble-free. 200-pound capacity. No. 498, $340.00.

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Write for complete facts about any piece of equipment you need

Exclusive Distributor of Steinlite — The World's Most Widely Used Moisture Tester

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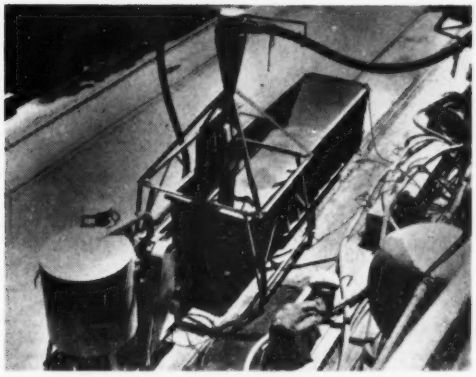


CONVEYOR. A new Vacuveyor, a pneumatic conveyor, has been introduced by the Vacu-Blast Co. This equipment conveys up to 40,000 pounds per hour and is fully automatic. Unskilled labor can be utilized since the only manual operation is to guide the pick-up nozzle.

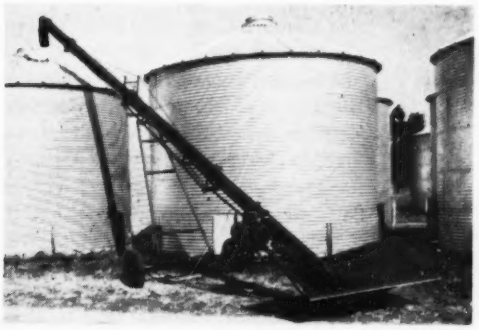
The Vacuveyor is adapted to unloading bulk railroad cars and trucks. It can handle any dry, bulk powders, grains, pellets or crystals, including soybeans and soybean oil meal and other feeds.

For further information write Soybean Digest IIc, Hudson, Iowa.

CROP DRYING. A crop drying manual has been issued by American Crop Drying Equipment Co. This 16-page booklet gives detailed methods for drying various crops including chopped, baled and loose hay, ear corn, shelled corn and small grains.

The company's crop driers are illustrated and described, also a considerable list of drying accessories including fans and moisture testers, field shellers and screw conveyors.

For more complete information write Soybean Digest IIa, Hudson, Iowa.



LOADER. Seedburo Equipment Co. has announced the addition of a new giant auger-type loader to its Hytrol line. The Giant is designed for easy, labor-free operation in large capacity handling of bulk materials, according to the company. It comes in 24-, 30-, 36- and 42-foot lengths and handles 3,000 or more bushels per hour.

All grain handlers, especially those who operate under government regulations advising the use of a dockage screen, will be interested in knowing that a screen is available for this model.

All models of the Giant Hytrol can be powered by either a 13 HP Wisconsin air-cooled engine or by any standard type tractor with power take-off.

For further information write Soybean Digest IIb, Hudson, Iowa

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PRATER

for meal processing equipment

As the recognized leader in the design of meal processing systems, PRATER has the experience and manufacturing facilities for completely outfitting your plant with:

PRATER
DUAL SCREEN PULVERIZERS
Known thruout the industry as the perfect granular grinder, with greater capacity — lower operating cost.

PRATER
CAKE BREAKERS
For disintegrating press cake before adding moisture and final grinding.

PRATER
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For reducing press cake prior to entry into solvent systems.

PRATER
WATER BALL BREAKERS
For breaking up agglomerations of solvent extracted flakes after adding moisture.

PRATER
PERMANENT MAGNETS
For safeguarding fast moving machinery from the destructive effects of tramp iron.

PRATER
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For sealing off the bottom discharge of dust collectors, bag filters, etc.

Whether you use mechanical screw presses, expellers, or the solvent extraction process, your best solution to meal processing problems is to get the advice and assistance of experienced PRATER Engineers.

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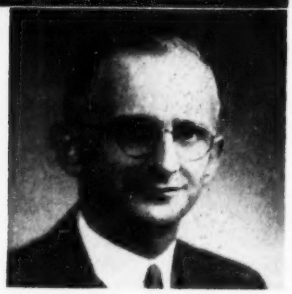
WASHINGTON DIGEST



By PORTER M. HEDGE

Washington Correspondent for
The Soybean Digest

FATS OUTLOOK. If you could wave away the big government stocks of cottonseed oil and butter, the supply of food fats would be fairly tight during the 1953-54 marketing year.

This is one of the key points in the Bureau of Agricultural Economics outlook report on fats and oils.

Production of food fats this season is estimated at around 8.3 billion pounds. This is 600 million pounds below 1952-53.

Total disappearance probably will be greater this season than last, BAE says. Therefore, some decline in stocks at the close of the season is anticipated.

As a result, BAE expects prices of edible vegetable oils to average "at least as high as their present levels" through next spring. The spread between prices of cottonseed and soybean oils is likely to be smaller than last year when cottonseed got a large premium.

Though BAE doesn't say so specifically, some advance in oil prices is anticipated. Soybeans are figured to move above price support level. Soybean meal prices also are expected to increase as the marketing season develops.

The 14-cent domestic minimum sales price set by Commodity Credit Corp. on its holdings of cottonseed oil is discussed in the BAE outlook. It is pointed out, however, that the minimum does not represent a commitment to sell at 14 cents.

It's believed that lard prices are a little high now, and some adjustment downward is likely late this fall. However, lard supplies this season are estimated at about 300 million pounds lower than last year. Lard prices will continue well above the low levels of last year through June and July.

Government holdings of cottonseed oil and butter represent 70 percent of the total Oct. 1 carry-over stocks of all food fats. CCC's cottonseed oil stocks represented about 75 percent of total carry-over of vegetable oils.

As a result, the total supply of food fats this season is a record high —estimated at 10.4 billion pounds. This is up 100 million pounds over last year.

Supplies of vegetable oils used mainly for food are likely to total about 5.9 billion pounds, a 5 percent increase and a record total. This season's production is estimated at 4.7 billion pounds—down 300 million pounds. The entire reduction is in soybean oil. Beginning stocks, however, were nearly double a year ago.

Continued strong demand is the saving factor. Both domestic and export use are expected to be a little larger this season than last.

BAE says: "In view of large CCC stocks of cottonseed oil, soybean oil prices through at least next spring will largely depend on CCC policy.

"Last year's average was 12.1 cents per pound. Currently the price of soybean meal is considerably lower than a year ago. Some increase in meal prices from the present level seems probable later in the season, especially if hog and poultry production increases in 1954.

"Prices of hogs and poultry are favorable in relation to feed prices. Through most of last year, soybean prices were comparatively high compared to prices of the oil and meal. They may continue so in 1953-54, particularly in view of the sharp reduction in the crop."

EXPORTS. "It appears that in 1953-54 U. S. exports of food fats and oilseeds may exceed last year's level, when over 40 million bushels of soybeans and the bean equivalent of soybean oil were exported.

"Of this total, about 32 million bushels (a record) were in the form of beans. U. S. soybeans are attractively priced for the export market (being the lowest in price since the spring of 1950 except for two or three months), and substantial quantities are likely to be shipped abroad.

"If, in addition to the smaller crop, there is a considerable purchase of beans early in the season for export, and producers place sizable quantities under the support program, bean supplies could become tight enough to raise prices above support."

About half of last year's soybean exports went to Japan. Formosa and the Netherlands also took more than a year earlier. Through last July, Japan, Canada, Formosa and the Netherlands took 23.9 million bushels of soybeans. For the same period a year earlier, these countries took 10.6 million bushels.

World production of fats and oils has recovered to about the prewar capita level, BAE says. However, much of the surplus available for export is in the United States. "If world consumption levels are to be maintained, importing countries may need to draw on the United States for increased supplies of food fats during 1953-54."

Exportable supplies from sources outside this country are uncertain. One important factor is the volume likely to be exported from China.

Shipments of Chinese soybeans and oil through the Suez Canal in the first half of 1953 totalled 10.3 million bushels. This is a 56 percent increase. However, it is not known what percentage of the total went to Eastern Europe and Russia. If Japan bought beans from China as it did before the Korean war, these beans would not be available for Europe. There are some indications, BAE says, that Japanese purchases of U. S. soybeans this season may be nearly as large as taken last season.

MEAL USE. Estimated use of oilseed cake and meal during the 1953-54 season is down 250,000

tons below last year. Here are the preliminary figures for the two years:

	1952	1953
Soybean	5,500,000	5,150,000
Cottonseed	2,600,000	2,650,000
Linseed	500,000	550,000
Peanut	45,000	60,000
Copra	230,000	215,000

Carry-over stocks were a little larger this year than last. However, imports have been going down, and in recent months there has been a net export of cake and meal, principally cottonseed. There were heavy net imports during the first half of last season.

SUPPORTS. USDA's oilseeds advisory committee that met in Washington Oct. 8 has recommended a price support of 75 percent of parity for beans grown in 1954. However, there was a sharp division within the committee, with producer representatives favoring at least 80 percent. September parity for soybeans was $2.76 a bushel.

The committee proposed a 75 percent of parity support on cottonseed grown in 1954, and a 70 percent support for flaxseed.

There appears to be some chance USDA will set the soybean price support at 80 percent of parity next year. A number of top officials are reported feeling that a drop of much more than 10 percent in the parity support level would be too great. Present support of $2.56 a bushel represents 90 percent of parity last fall.

American Soybean Association Director Ersel Walley, Fort Wayne, Ind., is a member of this committee. He sounded producer sentiment in heavy growing areas before the meeting to learn that most favored 1954 supports at 80 to 90 percent of parity but did not favor acreage allotments in 1954.

Other suggestions of the oilseeds committee include:

Announce oilseed selling policies as far in advance as possible; push exports; and consider the possibility of supporting the price of soybean oil at a level that would reflect support to growers, rather than direct support of soybeans.

The committee also asked that 1954 acreage of soybeans be *excluded* in computing bases for any future acreage allotments that might eventually be put on soybeans. The intent is to keep acreage as nearly as possible with regular soybean producers. The committee was told this is legally feasible.

Corn acreage allotments are considered pretty sure in 1954. There is no intent, however, to have any allotments on non-basic crops. Officials say non-basic crop allotments aren't wanted, and there are no funds for administering such a program.

USDA REORGANIZATION. Fats and oils branch of Production and Marketing Administration is eliminated as a separate unit in the new reorganization of the Department of Agriculture recently put into effect by Secretary Benson.

All functions of the present PMA involving price support work, production, allotments, etc., are placed under a Commodity Stabilization Service in the new plan. Fats and oils have been dropped and several other commodity branches consolidated.

—sbd—

MARGARINE IN GERMANY

Although little fortified margarine was sold in West Germany before last September, about 75 percent of the product sold in that country is now fortified, according to Eugene J. Epstine, acting chief of the food and agriculture division of the Office of the U. S. High Commissioner for Germany. Competition is expected soon to spur the margarine manufacturers to fortify all margarine sold there.

This development has come about through private initiative rather than governmental action. As yet there is no statute requiring fortification of margarine in Germany, as there is in some other countries.

Next to the United States, West Germany is probably the world's leading user of margarine.

Market Street

We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate 10c per word per issue.
Minimum insertion $2.00.

FOR SALE—ALL MODELS ANDERSON expellers, French screw presses, flaking and cracking rolls, stack cookers, desolventizers, filter presses, Anderson rotary tube dryers, meal coolers. Pittock & Associates, Glen Riddle, Pa.

FOR SALE—15 ANDERSON EXPELLers; 11 Duo's, 4 Super Duo's; 10 Shriver and Sperry Filter Presses 42 inches x 42 inches to 12 inches x 12 inches; 3 Louisville Steam Tube Dryers; 6 Ro-Ball and Rotex Screens. Consolidated Products Co., Inc., 16 Park Row, New York 38, N. Y.

FOR SALE—New crop uncertified Wabash, Chief, Lincoln, Hawkeye, Adams, Bavenger, Perry. Bulk or bagged, truck-lots or carlots, recleaned or bin run. L. V. Mike, Centralia, Mo.

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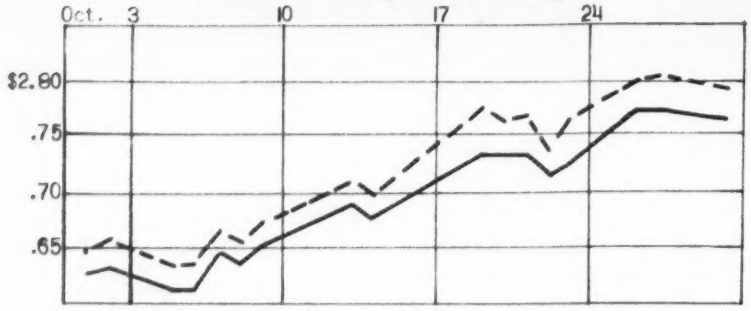
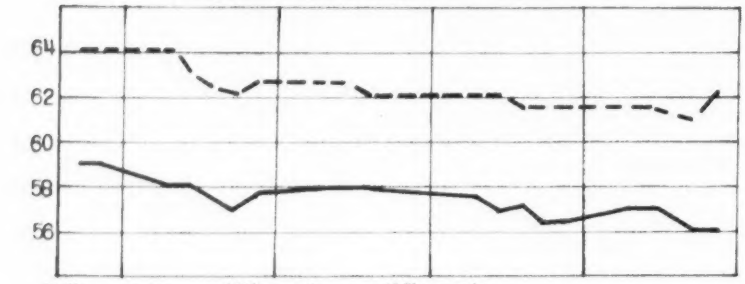
Futures No. 2 Soybeans, Chicago



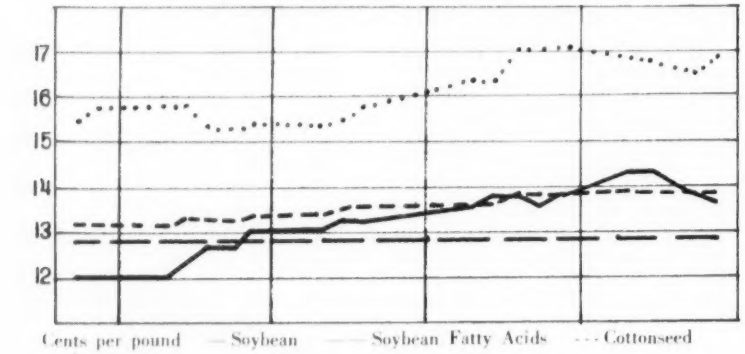
Dollars per bushel —November - - - January

Soybean Oil Meal, Decatur, Bulk



Dollars per ton —44% protein - - - 41% protein

Crude Vegetable Oils, Tankcars



Cents per pound —Soybean ——Soybean Fatty Acids - - - Cottonseed . . . Coconut

October Markets

SOYBEANS AND soybean oil made good gains in October. But meal was in the doldrums reflecting a sluggish demand for feeds, and hit the lowest point for the year.

Soybeans advanced for six straight weeks to reach the highest point since June. And oil reached a new high for 1953.

Factors in the stronger bean and oil markets:

1—The U. S. Department of Agriculture crop report making a severe cut in its national crop estimate.

2—Heavy storage of new crop soybeans by producers.

3—A pick-up in export demand with apparently more soybeans moving into export channels than at this time last year.

4—A Bureau of Census report showing a smaller visible supply of soybean and cottonseed oil. Combined soybean oil and cottonseed oil consumption for September was up 297 tank cars from the preceding month and 275 cars from a year earlier.

They added up to smaller supplies for the coming season than had been expected.

MEAL. Easier soybean oil meal prices were largely due to a poor mixed feed demand. Trading in feeds was expected to continue slow until the advent of cold weather.

MARKETS

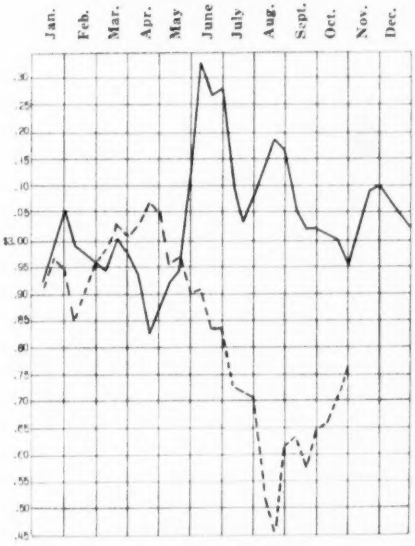
CARRY-OVER. Stocks of old soybeans in all positions Oct. 1 reached 10,997,000 bushels, the Bureau of Agricultural Economics reported. Total stocks a year earlier were 3,575,000 bushels.

Oct. 1 stocks this year were: On farms 6,620,000 bushels; terminals 1,098,000; Commodity Credit Corp. 240,000; processing plants 1,023,000; interior mills, elevators, and warehouses 2,016,000.

SOAPSTOCKS. Soybean acid soapstocks, delivered Midwest, declined from 4½ to 4 cents a pound during October. Soybean raw soapstocks declined from 1¾ to 1.37.

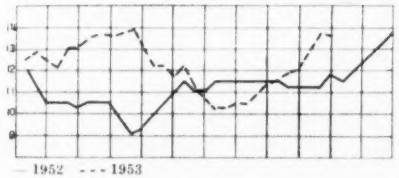
TRENDS AT A GLANCE

NEAR FUTURES SOYBEANS



SOYBEAN OIL MEAL BULK

CRUDE SOYBEAN OIL



—1952 - - - 1953

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AND MANUFACTURERS OF
COTTONSEED PRODUCTS
WEST MONROE, LA.

June 24, 1953

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Blaw-Knox Company
Chemical Plants Division
180 North Wabash Avenue
Chicago 1, Illinois

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When we placed the order for a Blaw-Knox solvent extraction plant two years ago, I was somewhat skeptical about your claim that prepressed cake could be extracted in granular form. In fact, as you probably remember, I insisted on leaving a place for flaking equipment in case it proved necessary for good operation. I am now pleased to report to you my initial doubts are replaced with a record of excellent performance on the past season's seed crop. Specifically, we have been processing at times 20% above the guaranteed rate and we believe that the plant could do even better than this.

We are also highly pleased with the oil yield that we are getting. Even at the high production rate, the extracted meal averages well below your guarantee of 0.5% residual oil content. In this season's operation, with the extra high yield, our oil quality has been high.

We are particularly pleased with the granular form of the cake as it comes from the extractor at our plant. This has proved to be an unexpected bonus, as we have been able to sell quite a lot of it as granules, just as it comes from the process, that is, without any grinding whatever.

The solvent extraction facilities that you installed for us, we feel, have improved our competitive position in the Industry with a corresponding increase in earnings.

Very truly yours,

THE UNION OIL MILL, INC.

C. W. WALLACE

CWW:mlp

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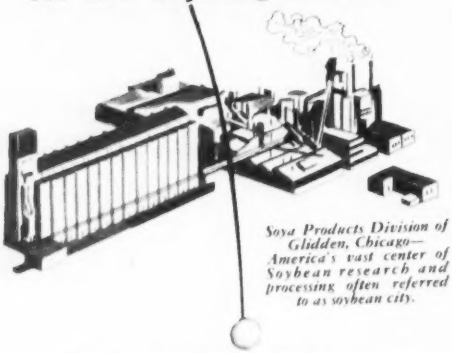

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IN THE MARKETS

● **FARM STOCKS.** Stocks of 6,620,000 bushels of old soybeans on farms as of Oct. 1 were a record carry-over, according to the USDA crop reporting board. They were more than triple the 1,952,000 bushels on Oct. 1, 1952, and more than double the 1944-51 average of 2,727,000 bushels. The six large producing states of Ohio, Indiana, Illinois, Iowa, Minnesota, and Missouri account for more than 90 percent of the total current national stocks.

The total disappearance from farms during the past quarter also set a new record. About 13.3 million bushels were removed from the nation's farms during the July to October period. Last year, 3.9 million bushels disappeared during the same time.

OLD CROP SOYBEAN STOCKS ON FARMS OCT. 1 (1,000 bushels)

State	Average 1943-51	1952	1953	State	Average 1943-51	1952	1953
N. Y.	17	6	6	Md.	27	12	14
N. J.	10	3	8	Va.	34	30	30
Pa.	36	11	13	W. Va.	*	*	*
Ohio	355	214	724	N. C.	58	51	24
Ind.	279	192	577	S. C.	9	21	6
Ill.	584	476	1,703	Ga.	2	2	3
Mich.	58	25	9	Fla.	*	1	*
Wis.	19	26	16	Ky.	17	12	9
Minn.	145	94	878	Tenn.	14	32	18
Iowa	702	325	1,879	Ala.	4	8	9
Mo.	206	258	491	Miss.	20	28	*
N. Dak.	3	7	4	Ark.	34	61	69
S. Dak.	12	17	76	La.	6	3	3
Nebr.	9	*	*	Okla.	1	10	9
Kans.	49	29	37				
Del.	16	4	5	U. S.	2,727	1,958	6,620

*Less than 500 bushels

● **EXPORTS.** U. S. exports of soybeans and soybean oil for July, as reported by the Foreign Agricultural Service of the U. S. Department of Agriculture.

Soybeans	1,831,784 bu.
Soybean oil	
Crude	4,047,113 lbs.
Refined, but not further processed	1,983,646 lbs.
Refined, deodorized and hydrogenated	29,925 lbs.

Converted to a soybean equivalent basis, the exports for July amounted to 2,448,700 bushels.

U. S. exports of soybeans and soybean oil for August:

Soybeans	1,251,070 bu.
Soybean oil	
Crude	6,940,943 lbs.
Refined, but not further processed	1,232,027 lbs.
Refined, deodorized and hydrogenated	128,533 lbs.

Converted to a soybean equivalent basis, the exports for August amounted to 2,087,710 bushels.

● **PLYWOOD GLUE.** Consumption and stocks of glue by the softwood plywood industry, reported by the Bureau of the Census (dry basis 1,000 pounds).

CONSUMPTION AND STOCKS OF GLUE AT SOFTWOOD PLYWOOD PLANTS.

	Consumption			Stocks		
	July 1953	June 1953	July 1952	July 1953	June 1953	July 1952
Total	8,796	10,584	7,163	5,151	4,838	7,243
Casein	223	*	197	159	*	206
Soybean	5,202	6,371	4,126	3,083	2,700	4,330
Urea resins	355	403	305	229	321	278
Phenolic resins	2,471	2,862	1,895	1,437	1,330	1,556
Other	545	*948	640	243	*487	873

*Casein combined with "Other" to avoid disclosing figures for individual companies.

● **PRICES.** Average price for soybeans received by farmers, effective parity price and price support rates (dollars per bushel).

—Average farm price—			Effective parity	Average price as percent of parity	National average price support rate	
Sept. 15 1952	Aug. 15 1953	Sept. 15 1953	Sept. 15 1953	Sept. 15 1953	1952 crop	1953 crop
2.83	2.40	2.33	2.76	84	2.56	2.56

Average farm and parity prices from Crop Reporting Board, B.A.E.

● **PROCESSING OPERATIONS.** Reported by Bureau of the Census for August and September.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, SEPTEMBER 1953-AUGUST 1953

Products	Unit of measure	Production Sept. 1953	Production Aug. 1953	Shipments and transfers Sept. 1953	Shipments and transfers Aug. 1953	End of month stocks Sept. 30 1953	End of month stocks Aug. 31 1953
Soybean cake and meal	tons	368,065	444,975	411,323	461,104	59,001	102,259
Lecithin	1,000 lbs.	1,819	2,020	1,970	2,019	1,470	1,621
Edible soy flour, full fat	tons	*	*	*	535	174	*
Edible soy flour other	tons	4,124	4,874	3,975	4,976	881	732
Industrial soy flour	tons	1,979	3,163	2,549	3,190	848	1,418

*Not shown to avoid disclosure of figures by individual companies.

SOYBEANS: RECEIPTS, CRUSHINGS AND STOCKS AT OIL MILLS, BY STATES, SEPTEMBER 1953-AUGUST 1953 (Tons of 2,000 pounds)

State	Receipts at mills Sept. 1953	Receipts at mills Aug. 1953	Crushed or used Sept. 1953	Crushed or used Aug. 1953	Stocks at mills Sept. 30 1953	Stocks at mills Aug. 31 1953
U. S.	697,884	222,960	466,718	560,531	459,548	228,382
Arkansas	*	*	*	*	2,297	9,803
Illinois	327,519	71,192	194,638	230,063	204,283	71,402
Indiana	107,497	57,690	60,088	59,767	66,762	19,353
Iowa	121,447	50,042	82,220	101,116	85,934	46,707
Kansas	8,885	1,104	*	*	6,709	*
Kentucky	*	4,219	11,497	9,275	*	6,705
Minnesota	22,405	21,467	23,190	27,868	7,586	8,371
Mississippi	5,551	*	—	*	6,011	460
Missouri	55,777	*	20,624	20,799	39,375	4,222
Nebraska	*	*	*	5,059	*	*
North Carolina	*	*	*	*	*	*
Ohio	35,371	16,523	56,669	75,937	19,635	40,933
Oklahoma	*	*	—	—	*	*
Texas	*	*	—	—	—	*
All other	13,432	723	17,792	30,647	20,956	20,426

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, SEPTEMBER 1953-AUGUST 1953

State	Crude oil (1000 pounds) Production Sept. 1953	Crude oil (1000 pounds) Production Aug. 1953	Crude oil (1000 pounds) Stocks Sept. 30 1953	Crude oil (1000 pounds) Stocks Aug. 31 1953	Cake and meal (tons) Production Sept. 1953	Cake and meal (tons) Production Aug. 1953	Cake and meal (tons) Stocks Sept. 30 1953	Cake and meal (tons) Stocks Aug. 31 1953
U. S.	172,756	207,993	32,229	60,035	368,065	444,975	59,001	102,259
Arkansas	*	*	288	100	*	*	991	2,686
Illinois	74,611	86,072	16,713	25,306	148,292	173,889	27,527	50,829
Indiana	22,276	23,734	2,730	9,155	47,734	50,157	8,192	14,664
Iowa	29,420	37,348	4,539	11,618	67,305	83,892	3,578	7,657
Kansas	*	*	621	78	*	*	*	*
Kentucky	4,327	3,492	*	873	9,200	7,340	564	1,279
Minnesota	7,966	9,675	2,460	2,866	18,966	22,012	485	1,357
Mississippi	—	*	—	*	—	*	*	1,976
Missouri	7,435	7,563	621	1,310	16,913	16,786	1,595	1,492
Nebraska	*	1,627	100	535	*	4,296	*	*
N. Carolina	*	*	*	*	*	*	8,382	9,962
Ohio	20,488	27,972	3,073	5,893	45,256	61,564	2,193	3,125
Oklahoma	—	—	—	—	—	—	287	539
Texas	—	—	—	—	—	—	•	•
All other	6,233	10,510	1,084	2,301	14,399	25,039	5,207	6,693

*Included in "All other" to avoid disclosure of figures for individual companies.

● **FACTORY USE VEGETABLE OILS** for August 1953, as reported by Bureau of the Census.

FACTORY CONSUMPTION OF VEGETABLE FATS AND OILS, BY USES, DURING AUGUST 1953 (1,000 pounds)

	Edible products: Shortening	Edible products: Margarine	Edible products: Other edible	Inedible products: Soap	Inedible products: Chemicals	Inedible products: Paint and varnish	Inedible products: Lubricants and greases	Inedible products: Linoleum and oilcloth	Inedible products: Other inedible products
Cottonseed, refined	13,083	2,348	1,433	—	226	—	—	—	68
Soybean, crude	—	—	—	68	—	420	—	58	1,149
Soybean, refined	42,144	6,148	9,900	—	—	5,835	19	—	4,610
Vegetable foots	—	—	—	2,879	—	76	—	—	767
Hydrogenated cottonseed oil, edible	12,480	14,376	1,284	—	—	—	—	—	1
Hydrogenated soybean oil, edible	31,036	52,156	707	—	—	*	—	—	—
Fatty acid stock	—	—	—	465	—	44	—	—	363

*Not shown to avoid disclosure of figures for individual companies.

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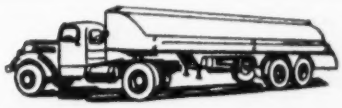
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● **INSPECTIONS.** Soybeans, inspected by grades and percent, as reported by the Production and Marketing Administration.

SOYBEANS: INSPECTED RECEIPTS, BY GRADES, AND PERCENT*

Grade	Oct.-Sept 1951–52		Oct.-Sept. 1952–53		September 1952		August 1953		September† 1953	
	1,000 bu.	%	1,000 bu.	%	1,000 bu.	%	1,000 bu.	%	1,000 bu.	%
No. 1	51,825	25	37,917	17	4,115	22	1,013	17	5,684	18
No. 2	93,074	45	107,220	48	10,192	54	2,730	47	17,549	56
No. 3	39,355	19	37,294	16	2,751	15	839	14	4,155	13
No. 4	14,855	7	28,073	12	1,167	6	820	14	2,949	9
Sample	7,969	4	14,946	7	662	3	464	8	1,134	4
Total	207,078	100	225,450	100	18,887	100	5,866	100	31,471	100

*Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,650 bushels. †Inspections of soybeans in September included 3,205,200 bushels as cargo lots, 555,302 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

● **SUPPLY AND DISTRIBUTION** of the 1951-53 soybean crops, reported by the Production and Marketing Administration. (1,000 bu.)

	1951-52	1952-53
Carry-over*	4,159	3,575
Production	282,477	291,682
Total supply†	286,636	295,257
Farm use including seed for season	22,500	22,800
Quantity remaining for processing, export, or carry-over	264,136	272,457
Disappearance through Aug. 31‡		
Crushed for oil or processed§	229,411	218,752
Exported	16,745	30,679
Total	246,156	249,431
Balance on Sept. 1 for processing, export, or carry-over	17,980	23,026

*Stocks as of Oct. 1. †Imports negligible. ‡October through August. §New crop soybeans crushed prior to Oct. 1 not included. It is believed that 4 to 6 million bushels of the 1952 crop were processed prior to Oct. 1 while only 2 to 3 million bushels of the 1951 crop were processed prior to Oct. 1.

● **SHORTENING.** Standard shortening shipments reported by the Institute of Shortening and Edible Oils, Inc., in pounds:

June 27	3,298,212
July 4	4,299,488
July 11	4,362,935
July 18	5,013,778
July 25	4,178,850
Aug. 1	4,782,288
Aug. 8	4,752,612
Aug. 15	4,814,063
Aug. 22	5,025,078
Aug. 29	5,545,370
Sept. 5	6,246,526
Sept. 12	5,752,443
Sept. 19	9,002,276
Sept. 26	8,624,201
Oct. 3	6,906,560
Oct. 10	6,377,647
Oct. 17	6,906,122
Oct. 24	7,186,712

Total shortening shipments for the first three quarters of 1953 were 179,395,000 pounds compared with 183,310,000 pounds the same period last year.

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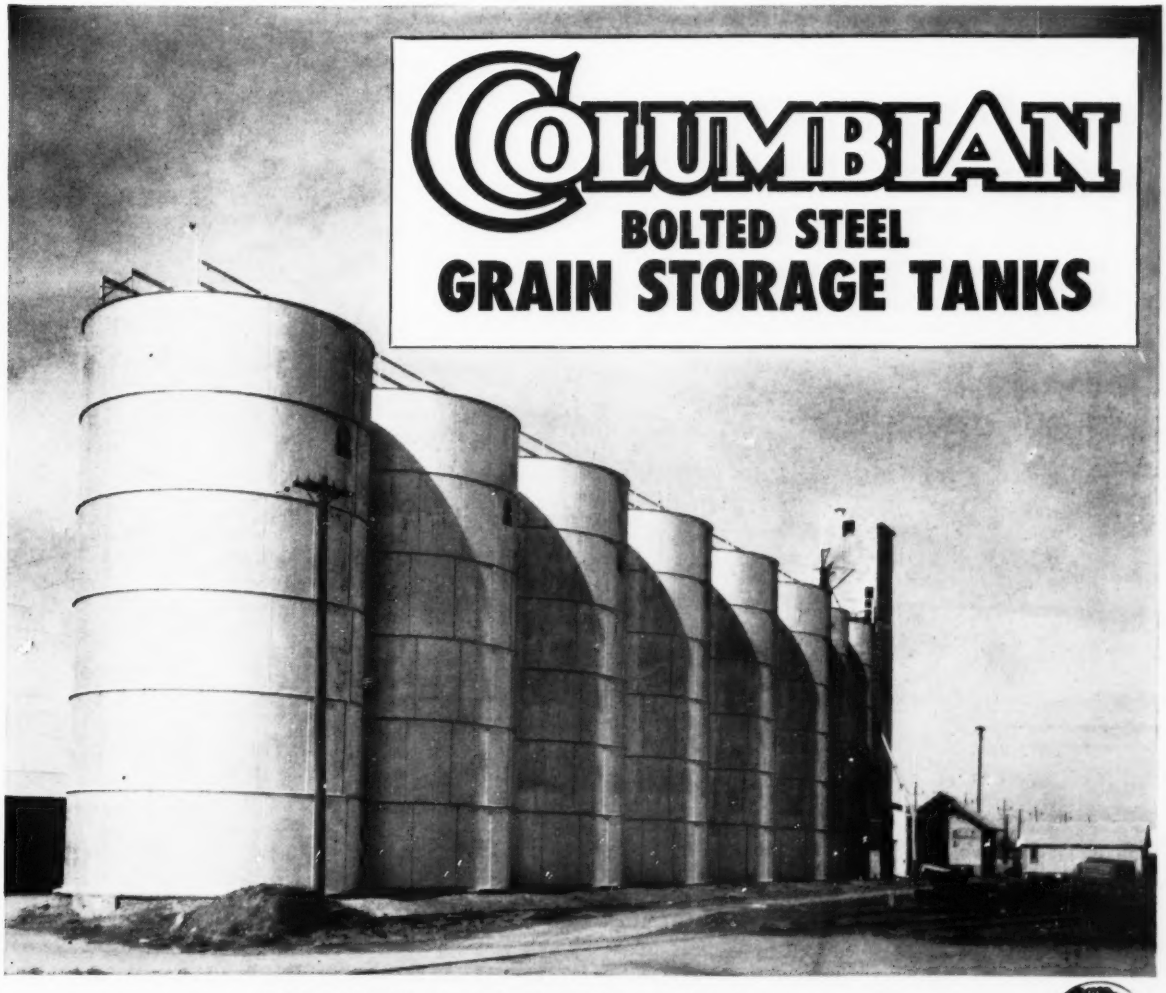

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SKELLYSOLVE D. Quality solvent at competitive prices. For degreasing meat scraps, extracting oil-saturated fuller's earth, general extraction uses.

SKELLYSOLVE F. Extracting cottonseed meals and other products in laboratory analytical work. Originally made to conform to A.O.C.S. specifications for petroleum ether, and for pharmaceutical extractions where finest quality solvent is desired.

SKELLYSOLVE H. Making edible and inedible oils and meals where greater volatility is desired than that of Skellysolve C or D.

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